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THE

INDIAN LANCET.

A Weekly Journal of Medicine, Surgery Public Health and of General Medical Intelligence.

Edited by RUDOLPH MONNIER M.B., M.S., Edin.

Vol. XXXI.]

CALCUTTA, MONDAY, JANUARY 20th, 1908.

[No. 3

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THIRTEEN CASES OF PROSTATECTOMY WITH COMPLICATIONS AND SEQUELLAE.*

By A. C. STOKES, M.D.

In reporting these cases it is not my intention to read a history of each case; only to discuss the resume of the experience gained by them.

First of all, I will refer to the method of operation. In two cases we have used the supra pubic method, but in the remaining eleven the perineal route, and the technique used was that described largely by Young. Despite the reports of some of the English surgeons and some of our brothers here, I am still a friend to the perineal route, and seem to get better results with less shock than by the suprapubic route.

Infection.—In eight of the thirteen cases, pus was present in the urine, and the bladder presented the cystoscopic appearance of a chronic cystitis. In all these cases healing was retarded. In six cases the entire wound became infected, presumably from the infection in the bladder. Cultures and slides were taken in five cases, and the B. C. C. were in all of them, and in three in pure culture. The other organisms were not isolated, but were cocci, resembling, in some cases, streptococci, and others staphylococci. In those cases where infection was not present, or was present in a very mild degree, where they could be controlled by urotropine and drainage, healing was much more rapid and satisfactory.

All cases of prostatic hypertrophy should be operated before infection of the bladder occurs. In order that we may follow this rule, instrumentation must not be used except for diagnostic purposes, and then with the greatest possible aseptic care. I wish also to unequivocally condemn catheter life and its recommendation for prostatitis. No man can catheterize his bladder several times daily without infecting it, no matter what his instructions have been, nor his education. The fact that some men live many years passing the catheter is only the exception, which proves the general rule that catheter life is dangerous, and we cannot expect good results from operative interference as long as we allow this method of treatment to proceed indefinitely, and only operate as a last resort.

Prostatectomy is not difficult nor dangerous operation, under the present improved, modern technique, and it offers almost certain relief, while catheter life can offer no possible hope of recovery, and can only introduce more and severer complications.

Residual urine was present in all thirteen cases before operations in quantities as follows: Two cases, 20 c.c.; 2 cases, 40 c.c.; 3 cases, 100 c.c.; 1 case, 110 c.c.; 2 cases, 160 c.c.; 3 cases, unable to measure because unable to enter the bladder with a catheter. After operation residual urine was present in only two cases, and those had an amount of 20 c. c. and 40 c. c., respectively.

Direction of development of the prostatic lobes was determined by palpation; cystoscope, and the sound. The following is the result: The length of the urethra was increased in every case from two to six inches longer than normal. By palpation through the rectum we found the following: Right lobe enlarged ten times; left lobe enlarged nine times; both lobes enlarged nine times; medium external developments four times.

The cystoscope developed the following: Medium internal development, three times; collar around the urethra like a cervix one time; greater or less prostatic pouch in every case; the prostate encroaching upon the bladder mucosa in every case. Inflamed posterior urethra in every case. Evidences of cystitis in ten cases; pus in the urine after catheterizing the ureter in three cases—the only cases in which this was done. Albumen was found in six cases. It was not determined whether the albumen was pus, but was so considered. Only one case showed any signs of uremia before operation, which cleared up immediately after operation. The ages varied from 57, the youngest, to 77, the oldest. About 66 per cent. were between 60 and 65 years of age. In only eight

*Read before the Nebraska State Medical Association, at Omaha Neb. May 7-9, 1907.

cases were we able to obtain a history of a previous gonorrhea. Their sexual history was in all cases that of great activity during early and middle life.

Shock.—Shock occurred in only one case to any degree, and that was in a man 77 years old, operated on at the County Hospital in Omaha, whose general condition was bad; however, by the use of normal salt, he reacted very well, and we had no further trouble with him, so far as shock from the operation was concerned. Old men will stand shock in these cases remarkably well.

The pulse and temperature is often very much at variance with ordinary infection. The temperature often runs a sub-normal course, remaining at 97 for a great many days, while the pulse will run up to 90 and 100, during the same time. Apparently this erratic temperature and pulse accompany the colon bacillus infection. After the operation the wound is packed with iodoform gauze in large quantities, which is removed entirely in twenty-four hours. In the whole in the urethra a large tube is introduced, large enough to fill up almost the entire urethral hole. The tube is removed every day and the bladder and wound irrigated with boracic acid solution. At the end of three or four days the tube is removed entirely, and a small drain of iodoform gauze introduced into the wound.

The urine began to pass through the urethra at the following periods of time—viz. . One case, 4th day; 1 case, 6th day; 5 cases, 8th day; 3 cases, 11th day; 1 case the 14th day.

In the last case a piece of gauze was left in the wound a week by mistake, and the period of convalescence was extended to five weeks in the hospital, but at the end of this time the patient was able to take the train for California.

The average length of time in the hospital was about 20 days—the longest, 35 days, and the shortest, 16 days. Voluntary urination followed every case—the voluntary passage of urine oftentimes being retarded from thirty to forty days. In no case, that I know of, has any obstruction occurred since the operation.

The immediate mortality of the patient has been none. One case died three months after leaving the hospital, from pyonephrosis; one died about five months after from pneumonia. The remainder, so far as I am able to get statistics, are still living.

Perineal urinary fistula remains in two cases, one of which left the hospital a couple of weeks ago. The other one is of about a year's duration, and will probably require subsequent

operative interference. Recto-urethral fistula occurred in only one case.

More or less frequency of urination persists in all cases, where cystitis was a complication before operation. This frequency varies from one to four hours.

Incontinence of urine is absent in every case, so far as I know. Sub-acute infection of the ankle joint complicated one case, Epididymitis occurred in one case. Stricture has not occurred in any cases so far as I know. Either chloroform or ether anesthesia was used in every case.

General indications for operation.—First, Operate as soon as prostatic hypertrophy produces (a) frequency of urination, (b) retention of urine, either acute or chronic, (c) residual urine to two ounces.

2. All cases should be operated before catheter life is instituted, after which operation we expect the results to be almost ideal.

3. In the present status of surgery of the prostate gland we are able to say that the results justify the recommendation of early operative interference.

4. A thorough knowledge of the anatomy of the perineum is an absolute necessity for the proper performance of perineal prostatectomy.

5. The contra-indications to operations are pronounced uremia, infection of the kidneys. There may be an age limit but it cannot be measured in years. It must be measured, from the condition of the patient's arteries and the general evidences of sterility.

6. I have never tried to do these operations, either with local anesthesia, spinal anesthesia, or any other anesthesia except the ordinary anesthetics.—THE VIRGINIA MEDICAL SEMI-MONTHLY.

APPLES FOR SLEEPLESSNESS.

The apple is such a common fruit that very few persons are familiar with its remarkably efficacious medicinal properties. Everybody ought to know that the very best thing they can do is to eat apples just before retiring for the night. Persons uninitiated in the mysteries of the fruit are liable to throw up their hands in horror at the visions of dyspepsia which such a suggestion may summon up, but no harm can come even to a delicate system by the eating of the ripe and juicy apples before going to bed. The apple is excellent brain food, because it has more phosphoric acid in easily digested shape than any other fruits. It excites the action of the liver, promotes sound and healthy sleep, and thoroughly disinfects the mouth. This is not all: the apple prevents indigestion and throat diseases.

TEN YEARS EXPERIENCE IN OBSTETRICS, AND A NEW CONCLUSION.

By C. B. WILLIAMS, M.D.

In presenting this report, I do not feel like offering an apology, for the subject is one of the most vital importance—old, yet ever new in the changing lights of modern medical progress.

I will not attempt to devote any time to the history of obstetrics in this paper, but will hasten on and give a brief account of my stewardship for the past ten years.

There is no other branch of medicine where the medical man is more handicapped by meddling midwives and untrained nurses, with their ignorance and superstitions, and by the very unhygienic mode of living of some of the women themselves, we are called upon to attend; and what makes the burden harder to bear is the very strict account to which we, as physicians, are held.

I have attended women who looked to me like it had been months since they had had a bath, and on beds so absolutely filthy, that the only way they could possibly escape infection was by an acquired immunity and the providence of an allwise God. Yet, strange as it may sound, most of this class got along just as well as their more cleanly sisters, but not all, for the three cases of sapræmia were undoubtedly due to dirty beds, etc.

We all try to educate these people that cleanliness is absolutely essential for the welfare of the woman in these cases, but they will not listen, owing, often to absolute laziness; and if the least thing goes wrong they blame it all on the doctor; he did or didn't do so and so.

In country practice, where we have to travel on horseback, perhaps, and over all kinds of roads often, it is, of course, utterly impossible to carry much of an obstetric outfit with us; yet we owe it to our patients to have instruments, gauze, etc., sufficient to deal with the commoner complications of labor, which we may be called upon to treat.

This report is taken from town, county, and contract practice, and does not include any consultation cases, but I have to include one case of another physician, which proved fatal in his absence from post-partum hemorrhage. I was called in haste, but reached her about an hour after death.

The cases are of mixed nationalities—Americans, Italians, Russians, Austrians and Hungarians; some cases among the well-to-do, the majority among the poor.

No cases of infection occurred in any of the foreign women, comprising 3 per cent. of nine cases, which may be partly

explained by two causes: First, when these women feel labor coming on they, no matter how dirty the house and surroundings, usually bathe themselves and lie down on clean sheets—something our native women do not always do, especially the ignorant poor; and, secondly, the foreign women stay in bed only a few days at the farthest, and many of them will sit up in bed right after labor and direct the dressing of the child in their own peculiar manner. They will hardly ever lie down much afterwards, except to sleep, and in a few days you see them visiting around with the baby. This is physiological, it seems to me, though I do not particularly advocate it for all women. They certainly get better drainage from the parts, and as far as I know, involution seems to be as perfect with them as where women stay in bed the conventional ten days or two weeks. Some cases can sit up after fevers, etc., very much sooner than others. Just so, I believe a woman after labor ought to be allowed to do—begin to sit up when she feels so inclined, under certain circumstances, of course. I believe you would hear of less retro-displacements of the uterus after labor if women sat up sooner, or were propped up more within two or three days after labor:

Total number of cases	...	...	...	242
Total born at night	...	...	...	120
Total born in the day	...	...	...	122

The maternal mortality was six—nearly 2.4 per cent.

Causes.—Two died from post-partum hemorrhage. One case I attended in a long difficult labor—woman æt. 30, said to be syphilitic. Placenta was delivered all right, got good contractions, gave a drachm of ergot by the mouth, stepped out of the room, I suppose for ten minutes. Just as I came in I heard her exclaim, "I am going to faint." Hemorrhage came with such a gush that she never reacted from the shock of it, and died in about six hours. The other case of post-partum hemorrhage, that was fatal, I reached after death.

One case died from pulmonary tuberculosis. Woman lived 17 days after labor. In one case, woman had mitral regurgitation. Developed passive congestion of lungs with blood stained sputum, cough, hurried respiration, and a failing heart at the termination of the third stage of labor, and died in about 36 hours. There was one case of septicæmia. Repaired lacerated perineum on account of hemorrhage; directed a douche of bichloride twice daily, but they never used it. Removed stitches in about seven days; no union, but lost of pus. Still insisted on douche, but the woman said her mother was afraid that the water would give her a cold. Developed chill on the 16th day after labor, and died in seven days. The other

case of septicemia was caused by nurse using an infected syringe without my consent or knowledge. Woman developed chill at 10 A. M. on June 5th, the third day after labor, and died June 6th at 2 A. M., axillary temperature between 107-108 degrees a few minutes before death.

The infant mortality was 17, or about 7.4 per cent.

Causes.—Two cases anencephalic, both born living, died in a few minutes. One case badly nourished, seven months; mother tuberculous. Five cases premature; mothers syphilitic. Four cases dead and macerated before labor came on; mothers all negroes. Two cases, twins; badly nourished; mother had mitral regurgitation. One case died from tetanus neonatorum. One case still born, from prolapse of the funis. One case probably smothered by bed clothes. Was normal at birth.

Premature—Seven cases; full term, 235 cases; macerated foetus, 4 cases, all colored; Vertex presentation, 238; breech and footling presentation, 3; shoulder and arm presentation, 1; prolapse of the funis, 1.

Forceps used 8 times—1 case high; 7 cases low.

Completely knotted cord—1; child robust.

Youngest mother, aged 15; child born when I arrived. **Oldest mother, primipara, 45**, she said. Had a bad laceration following a hard labor.

Toxemia of Pregnancy—1 case. Usual symptoms, edema, headache, urine loaded with albumen. Symptoms yielded to treatment, which was rest in bed under blankets, milk diet, compound cathartic pills and cream of tartar. No eclampsia; normal labor.

Pelvic abscess—1 case; syphilitic negro woman, child macerated, retained placenta, manual extraction. Pelvic abscess resulted, which ruptured through bladder. Recovered.

Under the head of Infection of new born there were 3 cases—First, tetanus neonatorum, fatal; 2 cases of ophthalmia. Both recovered with good eyes.

Injury of sacral plexus, 1 case. Hungarian woman, shoulder presentation; she wouldn't take chloroform; performed external version all I could and delivered with forceps. Had prolapse of the funis and a still-born baby from my efforts.

Inertia uteri—6 cases: 1 case fatal, 1 case required pack. Good results. Four managed with ergot hypodermically and irritation by hand in the interior of the uterus.

One case of hydramnios.

Twins, 1 case. Both died.

One child born while mother was in the second week of typhoid fever. Both lived.

One child born while mother was broken out with chicken pox. No trouble.

Mastitis—2 cases. Both mothers had had abscess of breast with all previous children.

Sapremia—3 cases; 2 cases mild; 1 case severe; temperature 105. All due to dirty beds and clothing. All recovered.

Adherent placenta—2 cases. First, colored woman, syphilitic; child macerated. Placenta removed manually. Pelvic abscess, ruptured through the bladder. Recovered. Second case, removed placenta manually; gave one intra-uterine douch. No infection.

Retained portion of placenta—1 case. Pretty severe hemorrhage, required pack; afterwards curetted with dull instrument. No infection. Good recovery.

Hydramnios—2 cases. Both moderate. Both children, anencephalic. One mother bled severely before reached her, ten miles out of town. Recovered.

Lacerated perineum, down to sphincter—3 cases: First case not repaired, primipara, 21, 45, lost slight of. Second case repaired. Woman died of septicemia. Third case repaired. Good result.

Slight tears of the perineum—5 cases. Used the douche. Good results.

Lacerated cervix—1 case. Not repaired. Recovered.

Prolapsus uteri—1 case. The cervix presented at least 3 inches from the vulva, when the placenta was delivered. No infection. Mother recovered her usual health.

CONCLUSIONS.

1. That lysol in from 2 per cent. to 5 per cent. strength has proven very satisfactory to me to clean my hands before examining a case of labor. It is a good germicide, a lubricant for the examining finger and in the winter time the hands do not chap and crack like they do after using bichloride of mercury, the last mentioned being an important item. But bichloride of mercury is better to leave with the nurse to keep the external genitals clean. It is more elegant and it does not mask the odor of the lochia.

2. That after introducing anything, hand, gauze or instrument, into the interior of the uterus during or after labor, it is always best to give an intra-uterine douche under the strictest antiseptic precautions, especially to boil the rinsing curette or douche nozzle and all instruments, and not depend upon simply soaking them in the solution you are intending to use.

Creolin has never failed me yet in preventing infection, where I have used it in such cases.

3. That the vaginal douche answers a good purpose often where you fear infection or have a perineal tear, but it should not be used except by a trained assistant or by the physician himself, and then only in special cases, for I have seen infection from this very cause, I believe.

4. That the perineum should be repaired if badly torn, using silk worm gut for sutures, provided you have a trained assistant, who can keep the woman as near surgically clean as possible, or the physician himself can attend to the douching, etc. Otherwise, I believe it best to leave them unrepaired, hemorrhage excepted, touching the surfaces of the tear with some antiseptic astringent—like iodine—and repair later.

5. That forceps should not be regarded as an instrument of torture, but as a life saver, both for the mother and the child—saving often hours of anguish, and, perhaps, precious blood from uterine inertia for the mother and the very life of the child itself.

6. That chloroform has so far been safe in my hands and has saved much suffering and many tears of the perineum. It is seldom indicated in a multipara.

7. That, especially in country practice, where it is almost impossible to get help quickly, the physician should carry with him all the instruments, etc., necessary and be prepared to pack the uterus, sew up a torn cervix or perineum, hemorrhage demanding it, treat convulsions, or deliver with forceps without having to wait for help and instruments to arrive. The reason I lay stress on this is due to the fact that we, as physicians, often get careless, and will go to these very unprepared for the emergency that may confront us. I have gone and found, to my chagrin that my lysol or ergot bottles were one or both empty.

8. That the physician should see the woman in a clean bed after labor, with the external genitals washed clean with some antiseptic solution before he leaves her, and not trust it to the nurse, and in no wise should he leave the house and bedside for at least one hour after the placenta is delivered, so he can watch the contractions of the uterus and for indications of hemorrhage.

9. That I have seen viburnum-prunifolium relax a rigid os fully as quickly as chloral, and it is a safer remedy. As a rule, the patients retain it in the stomach, where chloral might be rejected.

10. That ergot should be administered hypodermically to check hemorrhage. It acts well by the mouth to ward off hemorrhage.

11. That quinine and strychnine in proper doses will whip up the lagging pains near the end of the second stage of labor often.

12. That it is best to give a dose of ergot as soon as you are sure the uterus is empty, for it wards off hemorrhage and helps involution.

13. That a hypodermic of morphia will stop false pains, and if the pains are just nagging, and the os rigid, will often hasten the dilatation of the cervix, besides giving the woman rest. Morphia is our safest remedy for after pains. A nice way to administer it is in the form of chyorodyne.

14. That the bowels should have attention before the historical "third day" and many of your patients will escape the malaise, headache, and rise of temperature that may come from a loaded bowel.

15. That a saturated solution of boric acid kept constantly applied on lint to fissured and sore nipples, combined with rest for the organ a few days, with breast pump and nipple shield, is about the best treatment for fissures of nipple, and will prevent mastitis in most cases. If the breasts become lumpy, massage them with olive oil, stroking towards the nipple to unstop the milk duct that is clogged.

16. That the best way, in my opinion, to avoid a perineal tear, when you fear one, is to have the woman let go any ones hands she may be holding, open her mouth and cry out instead of straining, the doctor holding back the child's head at the height of the pain; and just when the head is ready to pass the perineum shell it out between the pains, while crowding the chloroform a little. I know the authorities advise us not to tamper with the head at this time, but I shall continue to do this in the future until I can find out a better way.

17. That it is a risk to leave multipara, even though the pains are lagging and be gone, for any great length of time after the cervix is dilated or dilatable one and a half inches, or more.

18. That I believe it is best, in selected cases, of course, where the perineum is not torn—where you do not fear a hemorrhage and when the circulation is good—for the woman to be propped up early, as soon as she feels like it, and to use the chamber instead of the bed-pan, for she will get more exercise, can sit up sooner with less danger of syncope; she retains her strength better, drainage is ideal and this lessens the danger of infection from retained vaginal clots.

19. That just as few vaginal examinations as possible is best. I always feel that the woman has a better chance to escape infection if there has been no occasion to examine her

at all. The only indication for frequent examinations and any pulling or trying to dilate the os is where the anterior lip of the cervix hangs down in front of the child's presenting part. You hasten labor by holding the anterior lip up against the symphysis. You can often watch the advancement of the head on the perineum by external palpation.

30. That the abdominal binder after labor is an unknown quantity, and I do not know whether it is of decided benefit or not. Some advise it and some say do not use it. It is a very good thing to which to pin the napkins, and some women say it is very comfortable, if a good wide one is snugly and evenly applied. It might have a good effect on the large abdominal blood vessels by keeping up the pressure on them for a while after labor and not removing it all at once. On the other hand it might favor retro-displacements of the uterus and prolapsus.

31. That I have less trouble with the cord, and it separates sooner where sterile vaseline or olive oil is used to dress it. Boric acid and bismuth seem to preserve it too long. I use boric acid after the cord separates. I really believe we should wash off the cord with, say bichloride 1-2000, or alcohol, and dress it only in sterile gauze. I offer this simply as a suggestion, having never tried it, but think I shall in the future.—THE VIRGINIA MEDICAL SEMI-MONTHLY.

HYPERCHLORHYDRIA.

BY ARTHUR F. CHACE, A.M., M.D.

Owing to the comparative ignorance of the science of physiological chemistry and the difficulty in making accurate examinations, advancement in the knowledge of digestive diseases has been very slow. The spirit of investigating thoroughly each new discovery before placing it in the category of fact, has resulted in the establishment of the specialty on a very firm and fairly exact basis.

It was not until forty-five years after Dr. William Beaumont had conducted his brilliant investigations on the motor and secretory activity of the stomach through the gastric fistula of Alexis Saint Martin that Kussmaul, in 1867, conceived the idea of relieving a young girl suffering from stagnation of ingested materials, by passing an ordinary rubber tube into the stomach and washing it out. This treatment was so successful that it gave a tremendous impetus to the study of gastric diseases. The stomach tube became not only a valuable therapeutic agent, but also a great aid in diagnosis. It afforded an opportunity to study both normal and pathological digestive function. Previously our knowledge was limited to the study

of the symptoms and to postmortem findings. Owing to the rapid disintegration of the mucosa of the stomach after death very little was learned from autopsies.

Twenty years after Kussmaul's discovery, Ewald devised a simple test-meal for determining the secretory activity of the stomach. This test-meal of roll and a glass and a half of water was ingested and one hour later expressed by means of the stomach tube. It proved to be so satisfactory that it has continued to be almost universally used for the past twenty years. An analysis of this expressed meal revealed the functional capacity of the stomach in health and disease. With this increase of knowledge a new nomenclature developed, based to a great extent upon chemical analysis of the expressed gastric contents after a test-meal. The old, indefinite terms, such as dyspepsia, indigestion, and catarrh of the stomach, fell into disuse and were replaced by more exact words, such as hyperchlorhydria, hypochlorhydria, and achylia gastrica. The new nomenclature became popular, not only because it was more exact and showed the association existing between the symptoms and the disordered function, but it frequently, by its very name, suggested the line of treatment.

This paper is based upon a study of seventy-three cases of hyperchlorhydria treated, in conjunction with Adjunct Professor R. H. Halsey, in Professor Edward Quintard's department of the dispensary of the New York Post-Graduate Medical School and Hospital from 1906 to 1907.

Hyperchlorhydria is a gastric disorder in which the secretory glands of the stomach, in response to the stimulus of ingesta, elaborate a gastric juice so rich in acid and ferments as to produce symptoms. Pawlow showed, by his experiments on dogs, that the mere introduction of food into the stomach was insufficient to excite the gastric glands to activity, but that a combined psychical and physical stimulus was necessary. Hyperchlorhydria should not be confused with gastroenterorrhea, in which an excess of gastric juice is secreted without any reference to the ingestion of food. Consequently, gastric juice is found in large quantities in the stomach at almost any time during the twenty-four hours. Naturally, the latter is a much more serious affection and may develop from hyperchlorhydria. In this definition of hyperchlorhydria only the qualitative change in the gastric secretion has been mentioned. There are certain cases in which the amount as well as the richness of the juice is increased.

In using Toepfer's method for the estimation of acid there are three things to be considered: first, the total acidity; second, the combined acid; third, the free hydrochloric acid. The total acidity is due to free hydrochloric acid, hydrochloric acid in combination with proteid material, acid salts, and any

organic acids, such as lactic or butyric, which may be abnormally present. The combined acid represents the hydrochloric acid which has united with the proteid in the process of digestion. The free hydrochloric acid is that which has been excreted in excess of the needs of digestion. Normally, the total acidity should be from 45 to 60; the combined, from 10 to 15, and the free, from 15 to 25. Normally, free hydrochloric acid appears in the gastric juice about thirty minutes after the ingestion of food. In cases of hyperchlorhydria it appears in from ten to twenty minutes. The appearance of symptoms is synchronous with the excess of free hydrochloric acid, and as the acid is secreted in larger amounts the suffering becomes more acute.

The degree of acidity necessary to produce symptoms is subject to great variation. One person will complain of heartburn and acid eructations with a total acidity of 65, whereas another, with a total acidity of 100, will feel perfectly comfortable. This shows that, in order for symptoms to occur, an hyperesthetic mucous membrane—a condition which is practically always associated with hyperchlorhydria—must be present in addition to the increased acidity. If the total acidity is above 60, or if it is below 60 and the free acid is two-thirds or more of the total, in patients having the symptoms of hyperacidity, they are classified as cases of hyperchlorhydria.

In studying the causes of disordered digestive function, the close association existing between the central nervous system, the sympathetic system and gastric secretion is at once manifest. Hyperchlorhydria is a frequent accompaniment of neurasthenia. The etiological factors are the same in both affections. Cerebral fatigue or excitement, emotional disturbances, such as grief, worry or fright, all have a tendency to stimulate reflexly the secretion of gastric juice. Students, about examination time; lawyers, during an important case; bankers, after a panic, and physicians, when overworked, are liable to suffer from hyperacidity. During the recent massacres of Jews in Russia, several Hebrews whose families were in that country came to the dispensary suffering from this affection. The American habit of fast eating is one of the most potent causes of hyperchlorhydria. The constitutional diseases which seem to be predisposing factors are cholelithiasis, nephroptosis, chlorosis, renal lithiasis and circulatory disturbances. Men are more often affected than women. Most cases occur between the ages of twenty and forty, and more patients appear for treatment in the fall than at other seasons. Some patients enjoy perfect health except for an annual attack of hyperchlorhydria in the Autumn. This, probably, is due either to the greater consumption of acid fruit at this season of the year or to a

lowered vitality after a hot summer. Continued stimulation of the gastric mucosa by irritants, such as pepper, mustard, tabasco, vinegar, salad, alcohol, particularly in the form of cocktails; large boluses of food in which the cellulose capsule has not been broken by proper cooking or mastication; very hot or cold substances rapidly ingested, such as ice water or ice cream soda; food-stuffs with large residues, such as cabbage and unripe fruits; the so-called appetizers; excessive amounts of tea, coffee, or chocolate; will eventually produce a well-marked case of hyperchlorhydria, and if untreated, this condition will finally produce a parenchymatous inflammation of the secretory glands of the stomach. Another factor in the etiology is the ingestion of large amounts of meat. Pawlow showed, by taking puppies of the same litter and feeding some on meat and others on milk exclusively, that these which were meat-fed developed hydrochloric acid in the stomach much earlier than those which were fed on milk.

The symptoms of hyperchlorhydria usually develop very gradually. In fact the patient is sometimes ignorant of the condition until the mucosa of the stomach becomes sensitive to the excessive amount of acid. By referring to the table it will be seen that one of the earliest and most common symptoms in the series of cases was a feeling of epigastric distress appearing from one-half to three hours after eating. At first, the patient describes this simply as a feeling of uneasiness after a heavy meal of irritating substances rich in condiments and starches. The distress disappears as soon as the stomach is emptied. After a time, the discomfort becomes more marked and appears after each meal, lasting until the following meal or until the acid is neutralized by ingestion of alkalies or albuminous food. The fact that the distress is relieved in this way not only aids in the diagnosis of hyperchlorhydria, but demonstrates that the symptoms are actually produced by the excessive amount of acid in the stomach. Owing to an excessive appetite, patients frequently acquire the habit of eating between meals. There is a particularly uneasy sensation in the stomach in the morning until food is taken. The distress after meal is frequently accompanied by pyrosis. When gases are retained in the stomach by the spasmodic closure of the pylorus, as the result of increased acidity of the chyme, the patients are annoyed with belching, although this symptom may occur under other conditions.

The frequency with which headache, vertigo, nausea and vomiting occur, may be seen by consulting the table. The symptoms were not recorded unless they were severe enough for the patient to complain of them. Forty-six of the seventy-three patients were markedly constipated. The only sign on

physical examination was diffuse tenderness over the epigastrium in thirteen of the cases. The tongue in uncomplicated cases was clean and bright red.

The two common complications are hepato-intestinal toxemia and myasthenia gastrica (motor insufficiency). The first condition is recognized by an icteroid discoloration of the sclerae, coated tongue, loss of appetite, constipation, headache, vertigo and a feeling of drowsiness. After these symptoms disappear under treatment, the regular signs of hyperchlorhydria again become prominent. The second complication becomes manifest when, in addition to the regular symptoms of hyperchlorhydria, the patient complains of eructations of gas, a feeling of fullness and distention, and satiety after small amounts of food. The physical signs are clapotage, downward displacement of the greater curvature of the stomach as shown by inflation, and the obtaining of remnants of food with stomach tube seven hours after eating.

The diagnosis of hyperchlorhydria is usually easy. Occasionally a patient comes to the dispensary with the diagnosis of a gall-stone in the cystic duct. Upon analysis of the gastric contents after an Ewald test-meal and treatment with alkalis, this proves to be a case of hyperchlorhydria. The pain of biliary colic bears no definite relation to the ingestion of food and is not relieved by alkalis. Hypersthenic gastritis can be differentiated by its chronicity, the severity of the symptoms and by the presence of mucus in the gastric contents. Gastroeccorrhoea can be diagnosed by the presence of large amounts of gastric juice in the fasting stomach. The pain of ulcer is usually continuous and very severe. It is made worse by the ingestion of solid food; nearly always there is also a localized point of tenderness in the epigastrium. There is one symptom which, as a rule, markedly distinguishes an ulcer from a simple hyperchlorhydria, i.e., the fact that when the stomach is empty pressure over the gastric region in a patient suffering from ulcer is apt to be just as painful as at any other time, whereas in uncomplicated hyperchlorhydria there is no pain or pressure during the intervals and very slight at any time. When the patient suffers from hæmatemesis there is no doubt about the diagnosis.

If cases of hyperchlorhydria are untreated and the exciting cause not removed, hypersthenic gastritis is apt to develop. A gastric ulcer may be the result of a severe hyperchlorhydria.

The treatment of this disorder is very satisfactory when the predisposing and exciting causes can be removed. Patients who exercise their brains and not their bodies must reverse the order. Regular physical exercise, preferably out-of-doors, together with rest from excitement and avoidance of worry are

essential. Cases associated with neurasthenia will not recover until the state of the nervous system is improved. Excesses of all kinds must be sedulously avoided.

The ideal diet is one which combines with the maximum amount of hydrochloric acid with the minimum stimulating effect on secretion. The proteid found in cereals and vegetables, egg-albumen, milk, and well cooked meats containing few extractives, such as the white meat of chicken, the white meat of fish, lamb, or sweet breads, answers the purpose very well. Highly seasoned foods, salads, condiments, appetizers, alcohol in any form, steaks and chops rich in xanthin bases; salted meats, uncooked fruits, and vegetables, such as tomatoes, owing to their content of acetic, citric, and tartaric acid, irritate the hyperæsthetic mucous membrane and increase the secretion of hydrochloric acid. In order to maintain nutrition, fats and carbohydrates must be given. Pawlow, in his experiments on dogs, demonstrated that fats inhibit the secretion of gastric juice. They undoubtedly have the same effect in man and, in addition, act as a sedative to the mucosa and exert a beneficial effect in counteracting the tendency to constipation. Almond oil or olive oil, before meals, and unsalted butter with the meals are very good forms in which to administer fats. Pawlow also showed that concentrated solutions of sugar or honey diminish the secretion of hydrochloric acid. Our experience has been that sugar, honey, syrups, marmalades and preserves increase the distress and pyrosis after meals. Their irritating action on the gastric mucosa, possibly by osmosis, more than offsets any beneficial effect they might have upon secretion. The prompt appearance of large amounts of hydrochloric acid after the ingestion of food, in hyperchlorhydria, checks the ptyalin digestion of starches, and, as a result, dextrin is found in the stomach after a test-meal. Normally, the starches should be digested by the ptyalin ferment to maltose. Because of this interference with salivary digestion, foods containing large amounts of starches should be given in moderation. Bread should be partially dextrinized by being twice baked or toasted. Only finely divided cereals, such as cream of wheat, hominy, rice or farina are advisable. Boiled rice is particularly good. It is better to take these with butter and with very little sugar. It might be mentioned parenthetically that oatmeal, owing to its content of *avena sativa*, stimulates gastric secretion. Some of the severest cases of hyperchlorhydria are caused by eating oatmeal, cream and sugar for breakfast. Although food should be thoroughly insalivated and broken up before swallowing, it must not be forgotten that the act of chewing stimulates gastric secretion. Many people suffering from this affection have acquired the habit of eating light breakfasts and lunches and large dinners. It is very

desirable to more evenly distribute among the meals the amount of food taken.

A breakfast composed of cereals, soft-boiled eggs and a good breakfast biscuit, such as Huntly and Palmers, with a cup of weak tea, is an advisable one. Lunch may be made up of toast, zwiebach, unsalted butter, glass of milk; white meat of chicken, with boiled rice; and custard for dessert. For dinner: sweet breads, or white meat of fish, or well-cooked lamb; puree of spinach; string-beans; a little mashed potato; bread which has been twice baked; glass of milk, with lime water if it causes distress without it, and baked apple or rice pudding. For variety other articles can be added from time to time. In severe cases it is advisable to give a little nourishment in the form of milk or matsohn with crackers or toast or a roast-beef-sandwich in the middle of the forenoon, midway between lunch and dinner, and before going to bed. Absolute freedom from worry at meal time is just as important as the character of the food ingested. Mild attacks of hyperchlorhydria will disappear by attention to hygiene and diet, without resort to drugs.

Alkalies, such as cooking soda, the famous rhubarb and soda mixture, soda-mint tablets, and many patented digestive combinations, the effect of which depend upon their content of soda bicarbonate, were employed in the treatment of this disorder by both the laity and the general practitioner for many years before the term "hyperchlorhydria" was used. The acid eructations and the heartburn probably suggested this line of treatment. The discriminate use of alkalies will do harm, because indirectly they stimulate the secretion of hydrochloric acid. Patients notice that to relieve these symptoms progressively larger doses of soda are required. The problem is to use the particular form of alkali that will combine with the largest amount of hydrochloric acid and leave, as a result of this chemical reaction, a non-irritating salt. Ammonio-magnesium-phosphate combines with a little more than its own weight of hydrochloric acid but the phosphoric acid and ammonium chlorid liberated by the reaction are very irritating to the stomach. Milk of magnesia, in one dram doses one half hour after meals and repeated if necessary, usually gives prompt relief and, in addition, has a laxative effect on the bowels. Magnesia usta neutralizes about twice its weight of hydrochloric acid, and the resultant magnesium chloride has a mildly cathartic action. If this is undesirable, it can be combined with bismuth subnitrate. Tablets are made containing ten grains of each. Soda bicarbonate has only one-fourth the acid-combining power of magnesia usta, and the end-products of sodium chlorid and carbonic acid exert no good effect upon the gastric mucosa. Three or five grain doses of sodium

carbonate, combined with the same amount of magnesia usta, act very well. In practically all of the cases of hyperchlorhydria treated in this department of the dispensary, ten grains of the glycerophosphate of soda in a glass of hot water, one hour before meals, has been prescribed at the instance of Professor Quintard. The preparation is very mildly alkaline. Administered in this way it has a highly beneficial action upon the gastric mucosa. The results from its use have been so very satisfactory that many of the cases have required no other medication. In advanced cases, in which the secretion is so great that it is not neutralized by alkalies, one-eighth to one-sixteenth of a grain of fresh alcoholic extract of belladonna is given in tablet form fifteen minutes before meals. This always acts promptly; but, owing to its poisonous effect, should be carefully watched and given only for a short time. The severe pain of hyperchlorhydria is sometimes relieved by an hypodermatic injection of one-hundredth of a grain of atropine sulphate. Cases of obstinate constipation are relieved by two teaspoonfuls of artificial Carlsbad Salts, in a glass of water, one hour before breakfast. It is better to resort to enemata than strong cathartics. A glance at the appended table will show that the above treatment has been highly satisfactory.

Tabulated statistics of seventy-three cases of hyperchlorhydria observed with Adjunct Professor R. H. Halsey in Professor Edward Quintard's department of the dispensary of New York Post-Graduate Hospital and Medical School from 1906 to 1907.

Age	No. of cases.*
10-20	4
20-30	32
30-40	29
40-50	7
50-	1
Sex	
Male	46
female	27
Nationality	
United States	23
Russia	15
Ireland	8
Austria	7
Hungary	6
Germany	6

*Where the sum of the statistics does not foot up to seventy-three, the point in question was not noted in some of the histories.

England	...	...	...	2
Italy	...	...	...	1
South America	...	...	...	1
Personal history of excessive amounts of.				
beer	...	...	...	4
whisky	...	...	...	8
tobacco	...	...	...	16
tea	...	...	...	4
coffee	...	...	...	5

Symptoms:

Appetite excessive	...	...	23
" good	...	...	25
" poor	...	...	12
Thirst excessive	...	...	4
Belching	...	...	19
Nausea	...	...	4
Vomiting	...	...	8
Acid eructation	...	...	27
heartburn	...	...	12
headache	...	...	14
Vertigo	...	...	13
Constipation	...	...	46
Diarrhea	...	...	0
Distress one half to two hours after meals	...	...	32
" two to three hours after meals	...	...	21
Tenderness over the epigastrium	...	...	13

Result of treatment: eighteen cases were relieved within one week; nineteen cases were free from symptoms at the end of a month; twenty-seven patients did not return, but it is fair to assume that a certain number of these cases experienced immediate relief.

Discussion.

Professor Wilcox.—It is clear that the treatment of gall-stones is surgical; it is also clear that the treatment of gall-stone disease is medical, and that the surgeon has nothing to do with it. Of course the point of infection may come from various sources, but so far as I know the starting point of most gall-stones is in the hepatic duct. This was never proved intra vitam until Professor Carl Beck made his interesting X-ray plates. I was glad to hear stress laid upon gall-stones in the common duct. With stones forming in the gall-bladder there

is always a history of jaundice more or less remote. Stones caught in the cystic duct by intermittent glycosuria and intermittent hepatic fever. One word as to signs. A gall-bladder containing stones is never enlarged except in so far as the gall-stones enlarge it. I have had the opportunity in the last few years of noting a large number of instances in which surgeons have operated and verified this point. The explanation is that the gall-bladder which contains stones is the seat of interstitial cholecystitis which keeps the bladder contracted. There is no cause for this in stones in the common duct or the ampulla of Vater, and in cancer. This is very important.

A few words with reference to Dr. Chace's paper. There is a book on my shelves entitled "On Digestion," printed in 1825 and written by Nathan R. Smith, Professor of Anatomy and Physiology in the University of Vermont. He brings out very clearly that the process of digestion is fermentation, a vital process, and he antedates a great deal that is taught at the present time. I approve of the more accurate methods of diagnosis, but as a clinician I have a certain amount of contempt for the stomach. I remember when I was a student at Heidelberg the stomach of a dog was removed and the dog did not seem to know that he had no stomach. This organ is a great convenience and at times a source of anxiety but not an absolute necessity. I like the new nomenclature better than the old, but I do not want "hyperchlorhydria" to be a peg upon which to hang a prescription. I recall a woman who had an ovarian tumor. She was also troubled with hyperchlorhydria, and was treated unsuccessfully for this condition. The tumor, which weighed about sixty pounds, was removed, and after that the patient had no more hyperchlorhydria. The tumor, acting through the sympathetic nervous system, caused the hyperchlorhydria. All the symptoms of hyperchlorhydria might occur with incipient tuberculosis. Myasthenia gastrica occurs as Dr. Chace has said, in late cases, and may be the result of the treatment of hyperchlorhydria largely by means of sodium bicarbonate, which should very rarely be given. The heavy magnesia of the last pharmacopeia or the heavy magnesium oxide of the present should be used instead. There is one source of error in testing for the chlorides which the Germans, especially, have fallen into, and that is that they neglect the combined chlorides as was first presented by Hayem.

Professor Rose.—Many ways lead to Rome and different methods may prove successful in the treatment of hyperchlorhydria. In many instances relaxation of the abdominal muscles, that is atonia gastrica, is the cause of hyperchlorhydria. Atonia gastrica or gastroparesis is present if not in all at least in most cases of hyperchlorhydria. Support of the atonia,

that is relaxed abdominal muscles, will have at least to some extent a curative effect on hyperchlorhydria. You may in some cases succeed with diet alone, but your results will be better if at the same time you support the abdominal wall. The diet is simplicity itself, based exactly on pathological principles, and I can give the outline in two minutes. Breakfast: Milk, hard boiled eggs, bread and butter. Hard boiled eggs are an ideal article of diet in hyperchlorhydria. We know how readily coagulated albumen takes up hydrochloric acid. Two hours after breakfast one vichy tablet in half a glass of water. By no means vichy water from the siphon, because the carbonic acid gas will produce an unpleasant effect. Lunch: Roast or broiled meat, little vegetables. Two hours later, vichy. Dinner: Roast or boiled meat the same as for lunch. The patient should eat as much as he can. Avoid everything which for physiological reasons forbids itself, that is nothing which aggravates the condition like acids, nothing which excites secretion like stimulants and spices, nothing ice cold as very hot, no sweets, no fruit. Going to bed the patient should take vichy or milk or a sandwich. These are the outlines of Halloway's diet in hyperchlorhydria which I am in the habit of prescribing, which is not only correct but has the advantage of simplicity.

The fact that hyperchlorhydria depends on anomalous nervous conditions has been established by the experiments of Pawlow. These experiments demonstrate that the craving for food, the appetite and chemical irritation of the membrane of the stomach effect gastric secretion, while mechanical irritation cannot produce such secretion. The whole physiology of digestion is at present controlled by the results of these experiments of Pawlow. The assumption of gastric secretion being produced in consequences of mechanical irritation of the gastric membrane is entirely out of the question now. New is, however, the knowledge of the relation of mechanical conditions—relaxation of the abdominal muscles: atonia gastrica—to gastric secretion.

Pawlow has a factory in his laboratory for the supply of real gastric juice taken from dogs. In a row on a long table there are, according to a description in a scientific medical journal, six large dogs imprisoned in crates. Each dog has a stomach fistula and the esophagus is cut in two about the middle of the neck. The dogs swallow with avidity pieces of meat placed before them in basins, but the esophagus being cut, the meat falls back into the basin, to be swallowed over and over again. Simultaneously the fistula in the stomach yields abundant quantities of an acid, limpid, gastric juice of which these factory dogs produced almost a litre in the course of one forenoon.

When the mucous membrane of the stomach is irritated by the mechanical touch of a glass rod or a goosequill or the mere finger, the resulting secretion is merely a slightly alkaline mucus, may the stomach be maltreated ever so long. Mechanical irritation of the stomach does not produce gastric juice. But when the animal is fed, the morsels, of course, falling out again through the severed esophagus, never reaching the stomach, there will be after a lapse of five or six minutes a proper secretion of a lipid gastric juice containing 0.5 to 0.6 per cent. of hydrochloric acid. But it is not even necessary to let the dog chew the meat; the fact of his merely seeing the meat itself or the cutting of it on a side table is sufficient to incite the production of juice after the same lapse of time. "Psychic gastric juice" or "appetite juice" is the name by which Pawlow designates the product gained under these circumstances.

The experiment shows the nervous connection between the higher mental organs and the stomach. The centrifugal course of conduction of this system is formed by the vagus, after the severance of which the psychic secretion of juice is inhibited.

An exceedingly sorry spectacle is presented by those dogs which had both nervi vagi cut and were therefore entirely minus psychic gastric juice. They perish soon, the food rotting in their stomach: naturally enough, for here we have achylia and stagnation in consequence of the cutting of the vagi.

If I were to speak again, as I have done repeatedly on the relation of atonia gastrica to hyperchlorhydria I would require the time of a whole lecture, therefore I have to refer to my writings on this subject, especially on the treatment of achylia gastrica by means of the abdominal belt which under certain circumstances is to some extent the treatment of hyperchlorhydria. Permit me to say only these few words. Atonia or relaxation of the abdominal muscles may have a decided influence on gastric innervation manifested by disorders of gastric secretion and relief from atonia may to some extent mean regulation of anomalous gastric secretion.

Professor Macphatter.—I did not go into the subject of the formation of gall-stones upon this occasion. Sometime ago, in a paper read before this Society, I discussed very thoroughly to the best of my knowledge, where and how these stones are formed. Certain stones form in the gall-bladder, others in the ducts. Very rarely we find quite large stones in the liver. Occasionally a nucleus of bilirubin, biliverdin carbonate of lime salts form, gets lodged there, finally breaking through the thin-walled radicles, and we have a gall-stone in the liver, or a liver-stone, as it should be called. I recall an instance in which

three very large gall-stones or liver-stones were found in the substance of the liver, far away from the tubes entirely. Stones are not therefore always formed in the gall-bladder; most frequently however, they are.

Dr. Chace.—The remark of Professor Wilcox that hyperchlorhydria is frequently a symptom of some underlying condition such as incipient pulmonary tuberculosis or uterine trouble corresponds with our experience. It is essential that such conditions should be remedied before attempting to cure the hyperchlorhydria. We have found by the examination of test-meals that the vomiting in the first few months of pregnancy is due to an excessive secretion of hydrochloric acid.

Undoubtedly the ingestion of large amounts of sodium bicarbonate has some influence in producing myasthenia gastrica, as Professor Wilcox suggested, but I think, a more potent cause is the retardation of the gastric flow by a spasm of the pylorus produced by the highly acid chyme passing into the duodenum.—THE POST-GRADUATE.

IS NOT THE CORRECTION OF FAULTY FASHIONS IN DRESS AN IMPORTANT FACTOR IN THE TREATMENT OF DISEASES OF WOMEN.*

By WILLIAM EDWARDS FITCH, M.D.

"Seest thou not what a deformed thief this fashion is?"

Mr. President and fellow members of the West Side Clinical Society, when I was requested by the chairman of your programme committee to prepare a paper of more or less universal interest to the general practitioner, I was at a loss to answer him, and asked for time. After much thoughtful consideration I became convinced that the subject of "Tight Lacing" was of especial interest to the physician, as well as to the gynecologist, while to womankind it is of momentous importance, and my only excuse for bringing this subject before you is the absolute necessity for seriously considering the subject of tight lacing as it exists today in all civilized countries.

Believing implicitly in the truth and earnestness of the views enunciated in this paper, the author feels no degree of trepidation in condemning tight lacing, and asks your thoughtful consideration of the subject as philanthropist, humanitarian and physician. I fear that in the mad rush for scientific research, we have, as physicians, overlooked the importance of this subject as an etiological factor in diseases of the female organs of generation. There is no one subject to which more

importance should be given by the profession and the author will try to faithfully point out in a practical manner the baneful effects of tight lacing, both as a factor in the etiology of disease and as an impediment to normal development of the uterine organs, which offers the greatest hindrance to disease, and at the same time to contrast the well developed conditions and freedom from pelvic disorders in those who do not practice tight lacing, with frail constitutions, barrenness with various uterine disorders—found in those who wear the corset tight. I wish it understood, in the beginning, that tight lacing is not confined only to those who wear the corset, since the clothing may be worn so tight as to do practically the same harm, though to a less degree by gradual compression.

Before discussing this subject in detail it might be well to briefly review the anatomy of the female pelvis so that you may better comprehend the idea intended to be conveyed in this paper.

The female pelvis consists of a solid unyielding structure of bones with a false pelvis representing a truncated cone, the base looking upward and slightly flattened on its anterior; the external and internal oblique, transversalis, pyramidalis and rectus muscles, with sheaths and tendons combining, from the lateral and anterior walls of a cylinder continuous with the last named structure. The spinal column lined with quadratus lumborum muscles form the posterior wall.

Enclosed within this cylindrical body-pelvis, from diaphragm downward, are the various abdominal and pelvic organs, all readily and easily displaced by pressure. Among these we find the uterus, which remains undeveloped and in an infantile state until near the approach of puberty, when it develops rapidly and continuously to increase in size, proportionately to the rest of the body, until the normal size is reached, which is usually between the sixteenth and twentieth year.

The virgin uterus is about two and one-half inches long, its width, at about the level of the fallopian tubes, nearly one and three-quarter inches, and its weight about twelve drachms. It is suspended in the pelvis by ligaments amounting to little less than folds of peritoneum. The fallopian tubes and the ovaries, with feeble supports, spread out on the right and left of the uterus in connection with the broad ligaments almost at right angles.

The ovaries formed from the Wolffian bodies rapidly begin to develop at the age of twelve—when a new era sets in—maturation and periodical rupture of the Graafian follicles; just before and after menstruation the remaining parts of the organs of generation rapidly increase in size. At least eighty-five per cent. of girls develop their generative organs between

*Read before West Side Clinical Society, New York City.

the twelfth and sixteenth years. It must not be overlooked that the uterus and appendages are covered, almost entirely, by peritoneum, which is very susceptible to injury even from the slightest causes; that the construction of vessels supplying blood is of such a nature as to favor either anemia or congestion, proportionate to the degree of compression exerted. With the free mobility of the uterus and appendages and the increased supply of blood the parts are receiving, or should receive, enables us to more clearly understand the effects of pressure on an organ requiring rest and freedom during the period of development.

It is at or about this period, or more frequently earlier, that the young girl is allowed to commence wearing corsets, and she is not always given proper instructions as to the degree of constriction that should be permitted.

"Either thou art most ignorant by age or wert born a fool."

"Nature stood with stupid eyes,

And gaping mouth which testified surprise.

The law of growth in the human body is one which has not always been considered in relation to development of girls. The energies of the body rise and fall in each individual with a certain rhythm. Each swell of the physical growth is designated to bring about certain morphological and functional conditions; and when these conditions are not secured at the time nature is accustomed to bring them about, or their maturation and development interfered with from faulty fashions in dress, there is a possibility of their not being completed and perfected in subsequent years. The maturity of the sexual apparatus and its function in the girl must be accomplished at that stage of development known as puberty; it is, of all periods in the life of woman, the most important, for her future health, both physical and mental, depend upon its completion and perfection. All the care and all the intelligence that it is possible for mothers and physicians to bestow upon her should be given at this time. Not only motherhood and subsequent health, but sanity and life-long happiness depend upon the perfect development of the female organs of generation. It does not seem unreasonable, therefore, that the foolish fashion and cursed custom of wearing tight corsets should be tabooed.

The corset offered in the shops is so constructed that when worn it exerts its greatest constriction—pressure—from an inch or so above the brim of the pelvis downward, constricting the abdominal walls, the lower part of the thorax, and pushing inward the costal cartilages, often causing the seventh and eighth ribs to overlap. The greatest point of constriction and

and compression is at the waist line, in the immediate neighborhood of the stomach which when distended, as after a hearty meal, produces the "hour-glass" stomach, often observed in this class of patients.

Tight lacing forces and crowds the small intestines with accompanying mesentery and colon into the pelvis, filling Douglas' anterior cul-de-sac; if the rectum is loaded with feces and the bladder empty, antiversion of the uterus follows; if the bladder is distended and the rectum empty, retroversion results, displacing the intestines into the posterior cul de sac. In most of these cases, where the compression is great enough to interfere with and retard the normal peristaltic action of the intestines, constipation is also produced.

We no longer doubt that compression of any part or organ interferes with physiological growth and function; therefore, all women who wear tight corsets and constricting waist bands, breathe with and well marked sternal movement, which is unnatural since nature intended woman to breathe like man—abdominally. Women when asleep breathe like men, and all animals male and female breathe alike—abdominally. Mays has shown that (1) Indian girls breathe like men and Kellogg (2) has confirmed this observation. Among several Indian tribes, Chinese women, agricultural English pit-brow lassies, and civilized women who wear their clothing loose at the waist or suspended from the shoulder, all show the same type of abdominal breathing; and the flimsy argument that chest breathing is normal to women, because it is necessary during gestation, goes to the wind when it is shown that (3) that even in the last months of pregnancy abdominal respiratory movements predominate over thoracic movements. The most active respiratory organ, that muscle of respiration, the diaphragm, adapts itself most beautifully to circumstances, so that, when from tight lacing the abdomen is constricted, the type of breathing becomes thoracic when pressure is relieved, it again changes to the abdominal type.

The Egyptians, who were foremost in the promotion of civilization, education and art, while allowing variations in luxuries, were the first to formulate legal barriers against the introduction of "any new ideas" of fashion in articles of dress tending to constrict the waist, or in any way to attempt to modify the true teachings of nature.

Does tight lacing and faulty dress interfere with abnormal respiration? The reasons for an affirmative answer are based on recent experimental researches by which certain facts seem well established that heretofore have largely been matters of

speculation, opinion, or prejudice, therefore we conclude as follows:

(a) Normal breathing in woman is like that of man—abdominal, tight lacing changes the type to costal (4).

(b) The pelvic organs normally make a considerable excursion with each respiration (5), tight lacing in the ambulatory position prevents this motion almost entirely.

(c) Sitting or leaning forward lessens intra-abdominal pressure (6) tight lacing in these positions greatly increases intra-abdominal pressure (7).

(d) Tight lacing displaces the uterus downward from 2 to 3 inches (8).

(e) The pelvic floor is bulged downward by the tight lacing from $2\frac{1}{2}$ to 3 inches and the circulation rendered sluggish (9).

(f) Undue constriction of the waist from corsets is a constant impediment to free indoor exercises and outdoor gymnastics are hampered.

(g) It has been shown that a loose fitting corset diminishes chest capacity one-fifth (10) and a tight fitting corset tends to the atrophy of the abdominal muscle and accumulation of fat.

(h) With each movement of the diaphragm, the structures of the pelvic floor with the uterus and its adnexa are carried downward from 1 to 3 inches and up again, in the case of women who have worn loose clothing about the waist (11).

Alternating pressure and relaxation accelerates the free flow of blood through the large venous plexuses and lymphatics; alternating traction and relaxation tends to develop uterine ligaments and their peritoneal investment, and gives tone to the muscular pelvic floor; alternate stretching and slackening tones up elastic supports. With each full inspiration the descent of the diaphragm increases abdominal pressure, and lessens that in the chest; blood is forced out of the portal and pelvic veins and sucked up above the diaphragm, therefore, it is plain to the critical observer that any form of dress that cripples the free excursions of the diaphragm impedes the pelvic circulation. The blood flow of the uterine organs is seriously hindered in another way. The valveless ovarian veins empty in the area of greatest corset pressure which causes a damming back of a long volume of blood.

When a constricting corset is worn little or no motion can occur, because all the structures in the true pelvis are carried downward by constant pressure and crammed into the cylindrical cone-pelvis so tightly as to entirely impede movement.

Kellogg and others (12) have demonstrated that pressure from a tight corset, or from a loose corset with the wearer stooping over or bending forward, bulges the pelvic floor downward to the utmost limit of its capacity, and the uterus is correspondingly forced to descend. This constant pressure for hours keeps the uterine supports tense and stretched for many hours daily, while exertion or stooping over strains these taut structures still further.

Africans, Indians, Eskimos, and all other nations who wear loose fitting clothing are almost entirely free from pelvic disease. It is in this class of women that we find the most natural and perfect pregnancy; the easiest and almost painless deliveries and the most rapid and perfectly satisfactory puerperium. Any physician who has practiced medicine in the rural districts for the well developed and healthy country woman, and later in the city for the dainty, delicate, badly nourished, poorly developed, and where tight lacing and other foolish fashions are practically universal, will soon be convinced that there is an explanation for the frequency of female ills and frailty in the latter, as compared with the freshness, vim and vigor, and fine physique of the former.

To any clear minded, thinking physician, there can be no doubt of the claim (13) that 75 per cent. of the women who habitually practice tight lacing, to any considerable extent, suffer from mal-development of the uterine organs, especially if the corset is worn at that period of life when uterine development conduces to diseased conditions, and practically renders the normal physiological functions of the organs incomplete and painful, nor will it be longer doubted by the close observer of passing events. Uterine Displacement—that subject about which so much has been written during the recent past and the treatment of which has been so varied that "Falling of the Womb," so prevalent in the minds of so many women and a "hobby" for such large number of doctors in the main, may be laid to the corset,

In no forms of mammalia, other than womankind of the civilized races, do we find uterine displacement or diseased conditions of the generative organs. Why is this? Tight lacing displaces the uterine organs and appendages and male development is the result. In anteflexion, which is often accompanied by inflammation of the utero-sacral ligaments, the downward traction on the tender ligaments is especially dangerous, moreover, the increased pressure from above flexes the uterus still farther when the bladder is empty—Dickenson (14) relates a case of a robust dressmaker who consulted him, measuring 5 inches less with corset on than over her undershirt with corset off. Her cervix and fundus met; so extensive was the bend, without other treatment than removal of

the corset, the uterus assumed its normal position in three weeks. In decensus of any degree the ordinary corset should not be worn.

In retroversion the pressure is exerted on the anterior surface of the uterus, forcing the fundus backward. Indeed, whenever an over-distended bladder tilts the organ backward abdominal pressure increases the displacement. Kellogg and others have shown by autopsy (15) that the abdominal organs are displaced by corset wearing. The liver has often been found pushed downward even to the iliac crests. One or both kidneys in 30 out of 100 cases examined were found abnormally low.

Mal-development of the uterus and appendages effects menstruation in various ways. Amenorrhoea is frequently the result of a poorly developed mucosa and its adnexa together with faulty developed ovaries—a condition which, if neglected, often leads to atrophy, or you may find congestion—menorrhagia with long continued profuse flow. Dysmenorrhoea is a condition mainly due to mal-development of both uterus and appendages, the nervous system, and also to the imperfect development of the muscular and cellular tissue entering into their make up, rendering them inadequate to their physiological requirements.

Physiologists tell us that there are in the uterus, embryonic cells which remain throughout life; they are the cause of epithelioma of the cervix, and the cervix in 98 per cent. of cases is the seat of uterine cancer, local irritation and ulceration being the exciting cause. Tight lacing by producing mal-position forces the os downward against the floor of the vagina, causing inflammation, irritation, and eventually ulceration. A prominent author says (16) "Up to puberty the mortality for carcinoma is the same, afterward the relative proportion of female to male deaths gradually rises till it attains its maximum at about the sixteenth year. Cancer of the uterus is a rare disease among Indian women, yet occurring with great frequency in all civilized countries, must have its explanation in some custom peculiar to such civilization."

Miscarriages, lacerated cervix, weak and inefficient contractions of the uterus in labor, protracted puerperium, the result of subinvolution, may often find their true explanation to be due; directly or indirectly, to mal-development. The increased frequency of endometritis, hyperplasia, erosion, stenosis, sterility and atresia of the cervix and os, must be largely due to this cause—a large number of the para-uterine cysts, as well as papillomatous cysts of the hilum, par-ovarian cysts of the broad ligaments, have their origin in these unobliterated ducts and the remains of the Wolffian bodies. Mal-development is surely accountable for this condition of affairs. Fibroid and

other tumors of the uterus have their etiology in mal-development of the organs of generation (17).

During the past few decades the Germans, who have always been early and earnest workers in new fields, have been busy inventing new bandages, supports and corsets for displaced organs. Israel, of Berlin (18), in a comparatively recent monograph describes a waist that acts by not interfering with the normal motions of the body, nor having any pads for making direct pressure over any of the abdominal organs, or the organs of generation. It is an apparatus with triangular air cushions made to fit over Pouparts ligament and the iliac crests, and is held in place by elastic bandages reinforced by braces and stays.

A few years ago, Gallant, of New York, published (19) some original ideas on a new straight front corset as an ideal orthopedic kidney support. He believes that the weight of the clothing and compression at the waist line at and after puberty have an important effect on girls in producing movable kidney (20). He recalls fifty cases where he made careful measurements and found abnormalities in the length of the trunk, as shown by the distance between the supra-sternal notch and upper border of the symphysis pubis, and the deviation from the normal relation between the circumference of the waist and hips at the trochanters. There was a hollowing of the epigastrium and bulging of the hypogastrium. Aspiratory rise and fall of the greater curvature of the stomach was observed in thin walled subjects.

Displacements occurred frequently after child-birth, which could have been remedied by a firm abdominal binder and exercise while in bed. Prolapsus of the colon and stomach were generally associated with that of the kidney. These conditions were not remedied by operation. According to Gallant, a properly shaped corset, put on before rising, in a semi-opisthotonos position, makes the patient comfortable and prevents complications.

It remained, however, for Health, of New York City, working along independent lines, to perfect the straight front corset—a specially designed abdominal corset that meets the demand of physicians for one that will successfully support displaced organs. The health corset is built on specially designed lines altogether different from all other corsets, and when perfectly (made to measure) fitted, lowers the waist line in front, gives perfect freedom of movement to the entire chest cavity, promotes deep breathing, and at the same time gives direct pressure and support from below upwards and backwards throughout the lower abdominal region, which not only reduces a large abdomen, but holds, in place all prolapsed viscera.

With this corset, there is absolutely no constriction at the waist line, nor above; all the compression is across the hips and lower abdomen, which is lifted upward and backward, leaving the chest free, allowing deep breathing, permitted chest expansion, and favoring an erect carriage. The corset is made with a long, graceful, straight front, which entirely covers the abdomen to the os-pubis, at the same time adding support to the diaphragm, instead of breaking it down as do other corsets. The waist line of this corset runs below the short ribs, which lengthens the waist producing graceful lines without compression, encouraging deep respiratory movements with the effect of enlarging the bust measure and throwing the chest forward. The average reduction of the abdomen from first wearing is from 3 to 5 inches and from 6 to 10 inches after the first month.

Rigidity instead of flexibility have marked every corset heretofore manufactured. This corset combines flexibility with elasticity which permits it to yield to every moment of the body, leaving the organs of breathing, the stomach, the liver and kidneys, the uterus, and appendages in their normal and natural position of unrestricted freedom. No woman ever thinks of loosening this corset, or feels the need, when it is removed, of taking a deep breath. On the other hand, all women who practice tight lacing with the ordinary corset from the shops, complain of pain on removing their corsets. Why is this? Because the pain is caused from the organs attempting to assume their normal position. This is the only surgical corset manufactured (22) which reduces a large abdomen, and holds in place all prolapsed viscera, and combines all the style and elegance of figure of the ultra-fashionable. As a surgical corset it is indicated in "floating kidney," enteroptosis, gastropptosis, dilation of the stomach and for supporting the abdomen after laparotomy and parturition.

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(18) Israel "Kossett and Leibbinde," Ther. Monatschrift.

(19) Gallant, "Waistbands and Corsets," Can. Journal of Med. and Surg., 1905.

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REPORT OF A CASE OF RAYNAUDS' DISEASE WITH SYMMETRICAL GANGRENE.

By ARTHUR F. CHACE, A.M., M.D.

Instructor in Medicine, New York Post-Graduate Medical School and Hospital.

In a thesis published in 1862, Maurice Raynaud described twenty-five cases of local asphyxia and symmetrical gangrene, of which twenty were found in literature and five were personal observations. The thesis attracted such world-wide attention that the disease has since been designated by the author's name. Very little has been added to the knowledge of this disease since the appearance of Raynaud's paper. As opportunity to study a well-marked case of Raynaud's disease with symmetrical gangrene is rare, it was thought advisable to report the following case.

H. A., male, age 45, tailor; born in Germany. His father died at the age of 96 and his mother at 95. One brother died from heart disease at the age of 50; his other brother is living and well; otherwise, family history negative. He has never suffered from any acute illness. Ever since he can remember, he has been a heavy drinker of beer and whiskey. He denies having had any venereal disease. When 33 years of age he suffered from severe constant pain in the epigastrium which was aggravated by ingestion of solid food. His appetite was good, but he was afraid to eat. After these symptoms had continued for several months he says that he vomited a "pail

full" of dark blood. This hematemesis was followed by several smaller hemorrhages from the stomach. He was confined to his bed for several weeks, and was unable to resume work for three years. For the following eight years, except for an occasional attack of epigastric distress two or three hours after meals, he was comparatively free from symptoms. At the age of 41 he again suffered from severe epigastric pain and the vomiting of blood. Blood was found also in his stools. He was operated upon at St. Luke's Hospital. At the operation a large mass was found at the cardiac end of the stomach. The surgeon, thinking it was a malignant growth, sewed up the wound without removing the tumor. After the operation vomiting ceased, and the mass disappeared, but the epigastric pain continued to be so severe that the morphin habit was acquired in his efforts to relieve it. For a year and a half he was under the influence of morphin most of the time. He was cured of the habit at the Montefiore Home.

He was admitted to the medical wards of the New York Post-Graduate Hospital on August 28, 1907. Seven weeks prior to admission the patient suffered from spasmodic attacks of tingling and burning at the finger tips. During the attacks the affected area was white. Exposure of the extremities to the air brought on a spasm of the arteries. In the interval of the attacks he was free from pain and the fingers appeared normal. At first he had only one or two seizures a day, but as time went on the attacks increased in frequency and severity. Five weeks before entering the hospital the tips of the first and second toes of the right foot became involved. He noticed that between the spasms of pain, the ends of the affected fingers and toes were somewhat cyanosed and numb. The pain was so severe that large doses of morphin were taken to control it. Two weeks before coming to the hospital a sanguineous bleb appeared on the tip of the first finger of his right hand. Subsequently this dried up and became gangrenous. The distal phalanx of the third finger of the right hand became involved in the same way. A few days later the tips of the distal phalanges of the first and second fingers of the left hand became gangrenous.

Physical examination on admission showed the following. Patient was well nourished. Complexion dark. Pupils small and reacted to light and accommodation. Special senses normal. No eruption. Mucous membranes were of good color. Tongue moderately coated and moist. Throat clear. Marked caries of the teeth. Heart apex beat not visible, impulse felt in the fifth interspace three and a half inches from the median line. Heart sounds normal. Few sibilant rales heard over the entire chest, and a pleuritic friction rub at the right base posteriorly. Abdomen: cicatrix about six inches long in the

right hypochondriac region, beginning at the eighth costochondrial articulation and extending in a curved line downward towards the umbilicus. The scar was about three inches broad, and the site of a large ventral hernia. Liver and spleen not enlarged. Many fecal masses in the ascending colon and sigmoid. Extremities: the distal phalanges of the first and second fingers of the left hand were black and mummified. The tips of the third and fourth fingers of the same hand were becoming gangrenous. On the right hand the distal phalanges of the third and fourth fingers were black and shriveled. There was a bulla on palmar surface of the distal phalanx of the thumb. On the planter surface of the great toe of the right foot there was large bulla.

The blood pressure was taken many times with the Janeway sphygmomanometer by Dr. A. E. Chace, of the house staff. The systolic pressure in the brachials varied from day to day between 140 and 125 mm. and the diastolic pressure between 110 and 105 mm. During the spasmodic attacks of pain and local syncope the systolic blood pressure was raised from 30 to 50 millimeters of mercury.

Examination of the blood was as follows:

	Aug. 31.	Aug. 31.	Sept. 23.	Oct. 4.
Erythrocytes	3,400,000	3,980,000	3,560,000	3,920,000
Leucocytes	8750	10250	9750	11500
Hemoglobin	94%	75%	70%	70%
Differential count:				
Polynuclears	66%	82%	76%	80%
Lymphocytes	33%	17%	24%	17%
Eosinophiles		1%		2%
Transitionals	1%			1%

Aside from a faint trace of albumin and an occasional hyalin and finely granular cast, the urine was found to be normal.

The temperature, pulse and respiration remained about normal throughout his stay in the hospital.

Course of the disease follows. The seizures of local syncope and pain became less frequent and lines of demarcation began to form about the areas of gangrene. Previously congested areas about the spots of gangrene began to assume a normal appearance. At first the patient was somewhat stupid between the attacks, but later he developed a form of muttering delirium which lasted until death. No focal symptoms of cerebral involvement could be made out. The reflexes remained normal. Ophthalmic examination showed the fundus and the retinal arteries to be normal. Examination of the ears showed them to be in a healthy condition.

The patient grew gradually weaker and died from cardiac failure on October 6, thirty-nine days after admission.

Treatment was as follows: Much relief was experienced at first by wrapping the affected parts in cotton saturated with a 15 per cent. solution of menthol in olive oil. The spasmodic attacks were frequently broken up by applying an Esmarch bandage about the extremity tight enough to stop the arterial supply. The bandage was removed in one minute. This method was first suggested by Dr. Cushing, of Johns Hopkins Medical School. One-fiftieth of a grain of nitroglycerin given hypodermatically during the attack sometimes gave immediate relief. By its use morphin could be discontinued.

The noteworthy features of this case are: the rise of blood pressure from thirty to fifty millimeters of mercury during the attacks of local syncope; the disappearance of the spasm of the artery and arterioles with relief of the symptoms on the application of an Esmarch bandage and large doses of nitroglycerine; the rapid development of the disease through the three stages, and the appearance of cerebral symptoms with fatal termination.—THE POST GRADUATE.

A Mirror of Practice.

WHOOPIING COUGH.

By RUSSELL J. SMITH, M.D.

Whooping cough, of itself one of the most fatal of the communicable diseases, is looked upon by most practitioners with complaisance, not to say indifference, and to this attitude of the medical profession is certainly due to the carelessness of the public in the matter of exposure, and the resulting high rate of mortality. A little well-directed effort on the part of the general practitioner would change all this, for his advice is generally accepted with respect and usually followed if tactfully given. The spread of knowledge among the laity of the seriousness of this disease and the necessity of isolation of each individual case, the development of public sentiment against the careless exposure of those in health to infection, thus making easy enforcement of laws protecting the public from such risk, and the recognition of the fact that our neighbour has rights in this respect, will make it possible to limit its prevalence and rob it of some of its dangers.

One other point which makes the public less amenable to restraint is the acknowledged inability of the medical profession to properly treat it.

Being a highly contagious disease for which at present there is no specific, and usually running a prolonged course, even

under the most advanced orthodox treatment, pertussis has become the bete noir of physicians, and we permit it to "cough itself out."

Pertussis is amenable to treatment, as are all the acute exanthematous and communicable diseases. The cause of the disease is a micro-organism developing its greatest effect on the mucous membrane of the larynx and trachea, which is under the influence of the superior laryngeal nerve. This region is easily reached by local medication in the form of sprays, and alkaline antiseptic solutions should prove useful. The inhalation of steam impregnated with volatile antiseptic oils is beneficial. The dominant agent in the treatment, however, is the much maligned drug, calx sulphurata, calcium sulphide. This is an internal systematic antiseptic of the greatest value in the treatment of all the communicable diseases. It attacks the cause of the disease at its source, it antagonizes the toxins in the blood, it prevents the development of the micro-organism, and the course of the disease is thus materially shortened. This drug attacks the morbid agent.

For the pneumogastric irritability we possess a drug that controls the spasmodic element with a wonderful ease. Atropine sulphate relaxes spasm, checks the distressing cough, and reduces irritation. It is of use only during the spasmodic stage. It produces flushing of the face and dilation of the pupils when given to physiological effect. Children bear atropine proportionately better than adults, but the effect must be watched. Slight flushing of the face must be produced to obtain any remedial effect in this disease. The paroxysms of coughing are markedly lessened.

In the catarrhal stage, calcium sulphide gr. 1-6, one or two granules every hour until the breath smells strongly of the sulphated hydrogen, with infants anodyne granules or small doses of codein sulph. to control cough, both to be combined in varying dose for days, will usually be sufficient to shorten the attack and make the spasmodic stage milder.

Hyoscyamin (amorphous) may be substituted for atropine and is equally efficient. For the nervous element, cicutine hydrobromide in small doses may be added to the treatment. It acts on the motor end organs, preventing the involuntary spasmodic contractions of the laryngeal muscles. It is safe and less depressing than the bromides, possessing all the advantages of the latter.

To liquefy secretion, emetin, lobelin, apomorphine hydrochlorat, helenin, singly or in combination, are reliable and pleasant expectorants.

Quinine hydroferrocyanide and brucin will counteract the adynamia present in this disease, and nuclein may be used

In ten-drop doses twice daily as a reconstructive in asthenic cases.

Aconitin (amorphous) should be given for febrile disturbance in small oft-repeated doses until effect.

The calcium sulphide must be combined during the course of the disease in sufficient dose to saturate the patient.

If bronchopneumonia develop, apomorphine is our sheet-anchor. It may be given in gr. 1-67 dose every hour or two until secretion is free and easily raised. Later sanguinarin nitrate gr. 1-67 is to be substituted.

Antitussin has been recommended by Rahner (Progressive Medicine, March, 1906), who has used it in two hundred cases with only 10 per cent of failures. Antitussin consists of five parts of difluorophenyl, ten parts of vaseline and eighty-five parts of lanolin, and is used freely as an inunction upon the neck, breast and interscapular region.

Annotations.

INJURIOUS FOOD.

Some foods are very injurious to the sight. A case was brought under the notice of the eye specialist in which the eyes of a whole family were affected by eating rabbit pie. In each instance the patient had become afflicted with a peculiar defect of vision that is technically known as "failure of accommodation." Some foods are proved to be the cause in a case of weakening of the sight known as amblyopia. Stale sausages and sour cream are equally injurious. Blindness resulting from eating tainted fish has been found almost impossible to cure, and quinine is also responsible for some persons half-blind condition. This drug affects the optic nerve in a manner that sometimes ends in blindness.

HOW TO STERILISE MILK.

Milk to be sterilised for the use of children should be placed in a clean bottle, which is put inside any convenient metal vessel, into which cold water should be poured until it reaches the level of the milk in the bottle. The mouth of the bottle should be closed with a plug of clean white cotton.

It will be found more convenient in practice to raise the bottle containing the milk about half an inch from the bottom of the outer vessel by any convenient means, as this facilitates the circulation of the hot water round the bottle.

The outer vessel should then be placed on a stove and slowly heated until the temperature of the water reaches 155 deg. F. The vessel should then be taken from the fire, and covered

over closely with a piece of woollen cloth. It should remain covered for half an hour, at the expiration of which time the bottle should be taken out and put in a cool place.

ACUTE COLDS.

There are five hundred ways to cure a cold. Some of the drug store cures offer to do the job in one day. The most common remedies are quinine, aconite, calomel, whisky, Dovers powder, and hot lemonade. These remedies, some of them at least, may be serviceable if judiciously used. If one keeps up good elimination from every source colds will seldom occur. This suggests something in the way of proper treatment. To 'feed a cold' is ill-advised. In treating a cold too, the vaso-motor system needs a good shaking up. Nothing does this better than the cold bath. If you have a patient who really can't afford the luxury of a cold more than a day or so, here is the way to cure him. Keep him in a comfortable room where the temperature is unvarying. Better still, if you can keep him in bed.

DISINFECTION OF HOUSES.

A very wholesome practice that bids fair to become an established custom is the disinfection of a house before a new family moves into it. This is done now where a case of very contagious disease, say, small-pox or diphtheria, has been known to exist; but how can we feel sure that the house we are about to move into and live it has not had in it an unrecognised or a suppressed case of measles, scarlet fever, or tuberculosis or typhoid fever? Disinfection after these diseases is of the highest importance. Then, again, there are those diseases that are not fatal perhaps, but, being communicable, may become certainly afflictions, nuisances. This precaution, therefore, should be demanded of every landlord by those who are planning to rent the house.

MEDICINAL VIRTUES OF SAGE.

The pretty ornamental sage-plant should never be forgotten to be planted and cultivated in any garden but it can also be found wild on chalky hills. It blooms in June and July. The leaves are dried and used as a tea in many instances. It is used both internally and externally, and in both cases has an excellent purifying effect on the system. Sage-tea is used as a gargle in congestion of the throat and mouth; two or three cups of the tea easily remove stomach congestions, and boiled in wine and water, sage purifies the liver and kidneys. Externally it is used especially in the care of wounds. The surface of any wound is easily purified, and the wound will heal more rapidly if a decoction of sage is freely used as a wash.

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Avoid imitations: Only from Ellwood, & Co., Globe Chemical Works, Calcutta.

The Indian Lancet.

CALCUTTA: MONDAY JAN. 20th, 1908.

MALARIA AND THE GOVERNMENT.

Malaria is too well known in this country to go into details regarding it. Suffice it to say that in this province especially, it is responsible for the largest number of deaths during each year. It repeats its doleful tale year after year and the same scene of desolation is enacted especially in the hamlets of rural Bengal where the population is being decimated and the survivors look emaciated and seem to drag on a miserable existence. The miasmatic theory of this persistent fever is quite exploded in the present light of our knowledge and the malarial parasite has been demonstrated beyond a shade of doubt to be the real and only cause of malaria. It is hardly right to blame the Government for everything evil that may befall us. The allegation that since the British Government has been firmly established in Bengal Proper, the epidemics of this disease have not only become more virulent but even more frequent. This has only lately been proved to be false. The hot beds of malarial fever in Bengal such as Nadia, Burdwan and Jessore have never as far back as we may choose to go, been sanitarium as has been so far dogmatically asserted so often. One salient and determining factor is sofre-

quently overlooked. The beds of the rivers, which years back acted as natural efficient drains have more or less silted up with the inevitable consequence that drainage in those areas, through which these water courses flow is imperfect, and may in its turn help in the ravages of malaria.

The Government has of late, after a good few years of lethargy wakened up to its grave responsibility with regard to this vital problem and has aided in excavating these choked up water channels and thus restoring drainage.

When even the lay public in Bengal are fully aware that mosquitos of a particular kind are in the bulk of cases the intermediate host for disseminating the infection to men by stinging them; it is only too apparent that mitigation or eradication of this scourge means the destruction of these subtle insects.

In proportion the mosquitos are lessened, the infection of malarial fever is also reduced. Here we may earnestly appeal to our landed aristocracy, who by clearing jungles and filling up stagnant pools of water and ponds can to a great extent help in the emancipation of their tenants from the thralldom of this demon of destruction. The Bengal Government should be congratulated upon its attempt in cultivating Eucalyptus trees, we may suggest that since a great deal of the subsoil moisture is done away with by these trees, our swampy villages in lower Bengal should be full of these elegant trees. The educated people should also put their shoulders to the wheel of improvement and try to inculcate into their illiterate and poorer brethren the causes and prevention of malaria. The civic responsibility does not cease with the amicable settling of village disputes but should embrace the alleviation of human suffering in the vicinity of their homes and hearths.

The utter disregard of sanitary laws in our remote hamlets makes us sometimes despondent and we think the conditions are beyond redemption. Let us instead, take courage and in the dawn of this infant year, resolve solemnly to fight this our common foe, in its very den face to face.

We should be proud if after a life-long striving we can reduce the mortality from malaria even by a single iota. We do not for a moment wish our readers to be under the impression that we are defending our Government.

True it can do a great deal in this direction, but its neglect if so it is, should never be the justification for our slothfulness. Elementary lectures on malaria should be made compulsory in vernacular for the primary standard. The task seems almost a hopeless one, but with one hearted endeavours on the part of the government, the zemindars and the people at large, the success is assured, though it may now loom in the far distant horizon.



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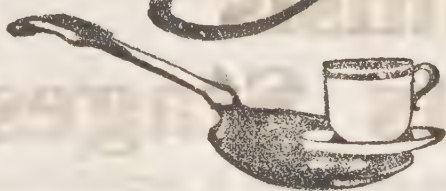
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Current Medical News.

THE ROMANCE OF MEDICINE.

No subject of investigation can be of more importance to man than the diseases to which the race is prone and their prevention or cure. But the importance of the healing art is equalled by the fascination of its history and the rapid development of medicine within the last hundred years in full of the most romantic episodes, which afford as good reading as a story of adventure or a fairy tale. This is exemplified by a book called "The Romance of Medicine," which a Scotsman, Dr. Macfie, has just produced with the laudable intention of familiarising the public with some of the more sensational medical discoveries of recent times and the manner in which they came about. By the discovery of antiseptics and anæsthetics in the Victorian era and their subsequent perfection, surgery has of late made most miraculous advances and it is useful to have in print accurate statements of the more remarkable operations. "Nowadays the surgeon opens the abdomen with as much sangfroid as a tailor slits up a seam," and of course the removal of the appendix is one of the commonest of operations. We hear of an Aberdeen surgeon opening up the abdomen simply to squeeze the heart, a species of massage which saved the life of a suffocating woman. Sometimes the whole stomach has been cut away and the patients did not seem to miss that supposedly indispensable organ. Then we have cases of extensive wounds in the heart which were successfully stitched up by daring surgeons, of skulls sawn through and malignant tumours in the brain excised, of intestines curtailed and sewn together again. Surgeons also can fill the role of beauty doctors and not seldom exercise a benignant influence over the human form divine by smoothing wrinkles, making dimples, correcting squints, improving the shape of noses or actually fabricating new noses, and transplanting skin. There are various methods of making noses, and Mr. Stephen Paget wrote that "in some cases it is perfectly easy in a few minutes to make a very fairly good looking nose." "A nose that had been perfectly flat and ape-like for many years might be made at least unnoticeable, so that it would not destroy and hinder a man through life." In fact the present volume bears ample testimony to the truth of the current belief that the progress in surgery has been altogether out of proportion to that of medicine proper. In medicine the greatest improvements have been secured in connection with prevention rather than cure; for instance, in the category of antitoxins some signal triumphs have been scored in the present generation.

It is a remarkable fact the greatest names amongst the successors of Hippocrates and Galen are Anglo-Saxon. Harvey, whose discovery of the circulation of the blood is the bed-

rock of modern medicine, was an Englishman, so was Jenner the hero of vaccination. The men who discovered the practical utility of ether and laughing gas were Americans, and Simpson, who achieved the incomparably more valuable introduction of chloroform as an anæsthetic, was a Scot. Lord Lister, the founder of antiseptic and aseptic surgery, is an Englishman who made his discoveries in Scotland. Coming to the most prominent of recent discoveries we find the names of Ross and Haffkine, the first presumably a Scotsman, the second at least a naturalised Briton. Pasteur alone amongst scientists who have recently made medical discoveries of first-rate importance was a complete foreigner. Whatever be the explanation of this peculiarity, whether the necessary union of patience, invention, practical skill and moral courage be favoured by the climate of the British Isles or be the special product of racial temperament, the fact is exceedingly satisfactory and significant. We do not deny that the practical discoveries we have enumerated were in some cases the outcome of the laboratory research of others but the man who takes the final step and converts an abstract proposition into a practical formula is the one who most directly benefits humanity. Thus a Frenchman introduced the microbe of malaria to the world, but it was left to Major Ronald Ross to solve the problem of its entrance into the human blood and thereby to provide a remedy against the ravages of malaria. It is not too much to say that the investigations of Major Ross—some of them in the nature of heroic experiments—have been the means of rendering life in the tropics for the first time safe for the European and saving countless lives in malaria-ridden countries. Some European countries even are so infested by the deadly "anopheles" that the population is degenerating apace. Greece, where flourished the highest civilisation the world has known, presents the sad prospects of a race rendered daily more emaciated and anæmic through malaria. Indeed it is not unusual for a third part of the inhabitants to be prostrated in a single year. Preventive nets—let alone inoculation—are quite sufficient to stem the tide of this national plague, now that the method of infection has been ascertained. Again, the mosquito has been convicted of causing Yellow Fever, and the book before us describes the heroic investigations of a band of American doctors in Cuba seven years ago, by which the hitherto unproved suspicion was substantiated.

With regard to vaccination—the inoculation of the human body with a serum of cow-pox as a protection against the more dangerous small-pox—there is nothing actually new to be said. But it is perhaps not generally known that a rudimentary vaccination with crude small-pox pustules taken from a patient was practiced by the Turks and other Eastern peoples long before European doctors had succeeded in mitigating the attacks of the most destructive disease of the middle ages. The famous Lady Mary Wortley Montague wrote in 1717 a historic letter on the subject when her husband was Ambass-

ador at the Porte, and the matter at once came into public notice. Before the middle of the century many thousands of persons had been inoculated, but though these particular individuals benefitted, they served to disseminate the disease among the uninoculated. It was not until the end of the 18th century, when the great Jenner adopted an injection of the non-infectious vaccine that the extirpation of small-pox as an epidemic became practicable. The practice soon became world-wide and Jenner became the most famous man of his generation. Poems, addresses and diplomas poured in upon him from all parts of the world, and even the Red Indians sent an address and a string of wampum. This appreciation by the untutored savage should shame those prejudiced persons in the United Kingdom who still question the efficacy of vaccination with less excuse than the ignorant in India hold aloof from the recently invented plague serum of Mr. Haffkine. Since the discovery of vaccination the adoption of antiseptics and anæsthetics has saved more lives than any other invention of the human mind. Pasteur's cure for hydrophobia was, it is true, a work of the highest genius accomplished with immense patience and at considerable danger—as we can read of it in connection with a powerful bull-dog which resisted experimentation—but the number of the victims of hydrophobia is not exactly legion even in India. But in the days before Leister forty-five per cent. of surgical amputations proved fatal owing to the entrance of microbes and consequent supuration, whilst the adoption of his treatment some forty years ago reduced the fatal cases to one-third of the former sum. More sensational, however, was Simpson's introduction of chloroform, for operations in midwifery exactly sixty years ago, and it must be said that no single invention has alleviated or will continue to alleviate human pain to so great an extent as this. Before 1847 a surgeon had need to be a man of the most iron nerve assisted in operations by a troop of giants to hold down the victim who struggled to be free like a poor animal in a trap. The descriptions of the operating room of old time such as we read in "The Romance of Medicine" are heart-rendering, and it is not surprising that so large a number of patients succumbed to nervous shock and actual paralysing fear. Had we space we should quote in detail the account of Dr. Simpson's experiments in anæsthetics. They were conducted in his drawing-room after a hard day's work, and the reward of long labour was achieved when he and his friends, after trying various substances inhaled a quantity of chloroform and fell with much noise prostrate on the floor, nearly upsetting the supper-table in the process. When a fortnight of this dramatic scene chloroform had been administered by Dr. Simpson to fifty patients at Edinburgh. The safety and reliability of the greatest medical boon which this or any other generation had received was finally and indisputably established. Needless to say a book which deals with such remarkable and stirring events, and deals with them in a vivid manner, will

provide good reading to all who care for man, his life and welfare.

PRECAUTIONS AGAINST CHOLERA SPREADING.

Cholera is rapidly becoming epidemic in the Polish provinces of Russia, and the German authorities are busy devising schemes to prevent its spread westward. Posts of observation have been established all along the Vistula and its tributaries. Owners of factories and mines have been forbidden to allow the drainage of their works to flow into the rivers. Cholera barracks have been erected at certain points along the frontier, and Russian raftmen and other suspected persons are only permitted to use certain trains and specially disinfected railway carriages on their passage through German territory.

These drastic regulations have to a great extent allayed the alarm which was felt in the eastern provinces of Germany.

SHORT ITEMS.

Cholera is committing great havoc at Alleppey, Thumpoly Kattur and Arthingal. The commercial status of Alleppey, which is the most important seaport in Travancore, has changed for the worse. The people from the interior, who supply raw produce for export, and coprah for the oil-mills there, avoid Alleppey, and several mills have had to stop work and business is at a stand still. The average daily death-rate in Alleppey is forty. The Roman Catholic cemetery at Kattur is full, and the dead have to be burned. A boat load eleven bodies was brought during the week for burial in the cemetery at the Arthingal Church.

The mortality of the city of Lucknow during the week ending the 21st of December 1907, was as follows:—From Cholera 1; Small-pox 3; Measles 26; Fever 186; Bowel complaints 35; Respiratory diseases 46; Injuries 4; Other causes 83; Total 364. The ratio of deaths to 1,000 population was 1.59.

More than two deaths from plague occurred in Hansapuri, Central Provinces, last week. Rats are still dying in that mohalla. Small-pox has broken out in Nagpur in the Khalasi Lines, where there are at present several cases.

The Municipal Council of Guntur has voted Rs. 100 to the Pasteur Institute at Coonoor, subject to the approval of Government.

In spite of an energetic campaign of inoculation, plague continues to give a great deal of trouble in and around Bangalore.

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Current Medical Literature.

MEDICINE.

CEREBOSPINAL MENINGITIS, RASH IN.

In connection on some features of recent cases in Glasgow, the writer states that in two instances a decided purpuric rash, purple in color and hæmorrhagic in character as to the spots, with the well-marked edges, was seen on the dorsum of the feet, but in no other area. In another case punctate hæmorrhages appeared all over the trunk and limbs in scattered patches of six or seven spots. In still another case, the rash appeared in crops at intervals of about seven days. On examination on the twenty-first day of the illness, purple and maroon spots, circular, with regular edges all the same size—i.e., that of a lentil—were seen on the dorsum of the feet, on the arms, the legs, the trunk (back and front), four below the chin, and one behind the ear. They were scattered over the body, with areas of three to four inches of normal skin between each. These spots were definitely hæmorrhagic in character, and so well defined as to be seen from a considerable distance, the picture presenting quite the aspect of "spotted fever." Two days later these had almost disappeared, but others took their place. W. Wright (Lancet.)

CHEYNE-STOKES RESPIRATION, BLOOD-PRESSURE CHANGES IN.

In ten cases of Cheyne-Stokes respiration occurring in man, the periodic alternation of dyspnoea and apnoea was accompanied by long Traube-Herring waves of blood-pressure. These cases may be separated into two groups as regards the relation between the respiratory periods and the blood-pressure wave. In group 1, each dyspnoic period was associated with a rise of blood-pressure; in group 2, the opposite relations existed. In the former, the pulse-rate was slowed during the apnoea; in the latter, during the dyspnoea.

Periodic respiration may be produced in animals by an increase of intracranial tension, and blood-pressure changes are observed which bear the same relations to the respiratory periods as occur in clinical cases of periodic respiration associated with increased intracranial tension. In the former case, the waves of blood-pressure rise and fall above and below the line of intracranial tension, and the underlying cause of the periodic respiration is a periodic alternation of anæmia and blood supply to the brain and medullary centres.

From the clinical standpoint, in the opinion of the author, the following conception is important. Cheyne-Stokes respiration occurring clinically in cases of increased intracra-

nial tension, in all probability represents similar conditions to that observe in the animal experiments, namely, blood-pressure waves rising and falling above and below the line of intracranial tension. According to this conception, the appearance of this condition in a patient indicates one of two things, either a still further increase in the intracranial tension, or a beginning loss of the blood-pressure reaction to the increased intracranial tension. In either case the prognosis is bad. A disappearance of Cheyne-Stokes respiration in a case of increased intracranial tension means, on the other hand, either a decreased in the tension or a rise of blood-pressure, and hence is of good prognosis. Cheyne-Stokes respiration that is accompanied by a rise of blood-pressure and increase of pulse-rate during the dyspnoic periods is probably always associated with increased intracranial tension. H. A. E. Eyster (Bulletin of the Johns Hopkins Hospital.)

—:00—

SURGERY.

RESEARCHES IN RABIES.

Dr. Wm. Literer gives the following under the heading of diagnosis of rabies in dogs. The technique is as follows: (1) Make thin brain smears. (2) Stain with Löffler's methylene-blue 25 parts; methylene alcohol 75 parts; saturated alcoholic solution, rose aniline violet 1 part; saturated alcoholic solution neutral fuchsin 1 part; distilled water 25 parts. (3) Add a few drops of water to the stain and allow to remain on for two minutes. (4) Wash and examine for Negri bodies. The whole staining process takes less than three minutes, producing just as good results as other methods which are longer and hence have a more complicated technique. The author has obtained good results from the following very simple stain recommended by von Gieson, Williams and Lowdin, viz., Methylene blue (Löffler's) 2 c.c.; distilled water 10 c.c. and saturated alcoholic solution of fuchsin gr. 3. By the use of such a stain a striking picture is produced. The cytoplasm of the nerve cells is stained light pink, the nuclei a light blue, nucleole a dark blue, the red blood cells a light yellow, while the Negri bodies stain a dark red. A well stained specimen will show in these "bodies" a few very small dark blue dots. They are called chromatoid granules. The method in preparing the very thin smears so essential for good results seems to destroy for the most part the cytoplasm of the nerve cells. So in examining by this method the Negri bodies will be found scattered throughout the entire smear mostly extra-cellular, as the nerve cells have been squashed by pressure in preparing which causes the extension of the bodies. In summing up the entire paper the author makes the following statements: (1) That it is the consensus of opinion that the Negri bodies are the true etiological factor of rabies. (2) That they are living organisms belonging to

a class of protozoa. (3) When found in smears or sections of the nervous system are specific of this disease. (4) These bodies have been found in other diseases than rabies. (5) That the smear method of examining for the Negri bodies offers us more rapid and reliable method of diagnosing hydrophobia than any other yet published.

GASTRIC AND DUODENAL ULCER PERFORATED.

From observations on perforated gastric and duodenal ulcer based on a personal experience of forty-six operations, the writer concludes that the liability to perforation is as great in the male as in the female; it usually occurs earlier in females, however. The prognosis is best in early life. There is usually a history of severe indigestion, but rarely of hæmatemesis. Premonitory symptoms of perforation are occasionally present. No constant factor will account for the rupture of the ulcer. Almost all gastric perforations are on the anterior wall and toward the lesser curvature. The duodenal perforations are almost invariably in its first part and on the anterior wall. There is usually but one perforation, its size varying from a pin's head to that of a three-penny piece. Suddenness of onset, overpowering pain, abdominal rigidity, and severe shock are symptoms perforations. Vomiting is not a common symptom. Percussion gives unreliable information. The seat of maximum of pain is a guide for the incision.

Apparent improvement is often very deceptive. Opium is a dangerous remedy, as it masks the symptoms. There is no constant relationship between the ensuing peritonitis and the size or site of the perforation, or any other single factor. The abdomen should be opened as early as possible by a vertical incision. It is seldom necessary to open the stomach to find the perforation. An omental graft should be secured over the line of sutures. Excision of the ulcer is not to be recommended unless it is imperative. If the closure of the ulcer has resulted in serious narrowing of the pylorus, gastroenterostomy should be performed, or, as an alternative pyloroplasty. The abdomen should be washed out and the head of the bed raised to favor drainage. Saline injections should be given. After twenty-four hours, fluids may be given by mouth. Complicating after-conditions are temporary gastric fistula, pneumonia, bronchitis, etc. The sooner the operation

is performed after perforation, the better the chance of recovery, Miles (Edinburgh Medical Journal.)

OBSTETRICS.

DEATH DURING EXPULSION OF FETUS.

Remy (Rev. Med. de l'Est) discusses the harmful effect which the efforts made by a woman when expelling the fetus may have upon the cardio-respiratory system when heart lesions or pulmonary phthisis are present. The uterine contractions are aided by the voluntary efforts of the woman. During these efforts the glottis is closed, and the thorax, which is filled with air, is fixed so as to give support to the abdominal muscles. The left heart is thus pressed upon by the distended lungs and is not able to receive and distribute the blood brought to it by the pulmonary veins. It follows that stasis is experienced in the vessels of the lungs, and the right heart, being unable to expel the blood coming to it from the venæ cavæ, becomes dilated, and the veins become engorged, as is evident from the swelling of the jugular veins. When a right heart already suffering from disease is distended in this manner it is liable to collapse and cause a fatal syncope. It is useless to advise a patient not to make expulsive efforts, for when she becomes aware of the pressure of the fetal head upon the pelvic floor she is unable to resist the impulse to bear down. The best course to adopt is to apply the forceps and deliver her promptly; in this manner the whole process is shortened and the efforts which might have a prejudicial effect are suppressed. It is not always easy to put this advice into practice, for the physician may not arrive in time or death may supervene before he has a chance of intervening, as the reported cases show.

A lady who had had serious dyspnea at her previous confinement came for advice during her next pregnancy; she had a feeling of oppression; epistaxis, and pallor, but no albuminuria, and her pulse was regular. She kept about till labor began, during the period of dilatation she remained in bed, and experienced no difficulty. As soon as dilatation was complete the midwife sent for the medical adviser, but with the first expulsive effort the patient made a few attempts to inspire. The fetus was promptly delivered by forceps, but it was not possible to reanimate it. There was lesion of the mitral valve, and a single effort had been enough to induce a fatal syncope.

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PATHOLOGY.**RECTAL OBSTRUCTION CAUSED BY CALCIFIED
UTERINE MYOMA.**

An unmarried woman, aged seventy, had suffered for some months from an obstruction which had in the last few weeks become worse. Rectal examination showed a hard, irregular growth situated in the pouch of Douglas and attached to the utero-vaginal walls. A diagnosis of rectal cancer was made. Laparotomy revealed a stone-hard tumor the size of the fist. This was easily separated from the atrophic uterus, with which it seemed to have but little connection. Its irregular projections rendered its separation from the rectal and posterior vaginal walls difficult. Microscopically it proved to be a markedly calcareous myoma. Calcification occurs generally in subserous fibro-myomata and rarely in others. When they become detached, as is frequently the case, they form the so-called "uterus steina."

**ANALGESIA OF THE TENDON ACHILLI IN
TABES.**

Racine (Munch. Med. Wchschrft.) says that a more frequent early symptom of tabes than reflex rigidity of the pupils and absence of the patellar tendon reflexes, consists, according to Abadie, in the absence of the normal sensation on pressure of the Achilles tendon. He investigated these statements, employing for accurate determination a pair of forceps, the branches of which, on being brought together, directly indicate the pressure that has been exerted, in values of kilograms (1 kilo equals approximately two pounds). In the normal individual a disagreeable sensation is said to occur on pressure amounting to 5-10 kg., followed by pain on pressure of 10 kg. and over. It is true that in 78.3 per cent. of the cases of tabes (33 patients), there was a diminution of sensation down to evident analgesia. Keeping in mind the fact, however, that similar variations occur in healthy individuals also, and that on the other hand they may be entirely absent in very severe cases of tabes, the value of the observation is doubtful. In addition to the analgesia of the Achilles tendon, the author invariably found the classical symptoms of tabes in his cases; and, on the basis of the material examined by him, he holds that Abadie's

symptom is an early symptom of tabes, but by no means a stigma of the disease.

THERAPEUTICS.**ADRENALIN TO COMBAT PAIN.**

Dr. Carlton has used adrenalin externally to combat the pain accompanying functional neuralgias and neuritis. The only absolute failures noted were cases of neuralgia, springing from toxic conditions. Reflex neuralgias of great severity were relieved for periods varying from a few hours to several months and the pains of gout, articular and muscular rheumatism, and myalgia are relieved almost entirely for a considerable time after the application of the adrenalin. In nearly 100 cases one application of an adrenalin ointment relieved the patient of pain in cases of recurrent facial neuralgia for periods of from one month to six months. Carlton says that the quantity of a 1 to 1000 ointment of adrenalin to be used in any affection of a peripheral nerve should not exceed from one to two minims, by injection, except in case of the sciatic nerve, when two or three minims may be used. Larger quantities often produce ischaemia which might prove injurious. The application of the ointment must be made directly over the affected nerve.—Therapeutic Gazette.

VACCINE TREATMENT OF TUBERCULOSIS.

Riviere has treated a number of cases of tuberculosis, such as tuberculous dactylitis, superficial abscess, tuberculous glands, tuberculous joint disease, psoas abscess, abdominal tuberculosis and phthisis, with tuberculin under opsonic determination. He believes that tuberculin is a most valuable remedy for such patients, especially if nutrition is not greatly impaired. With proper dosage a steady improvement occurs both in the local conditions and in the general health. Even the secondary infection lessens severity. He urges, however, that the treatment should be undertaken by none except those who have given it special study.—British Medical Journal.

IS GASEOUS DISINFECTION RELIABLE?

Dr. J. F. Armentrout says that various methods have been employed for the liberation of formaldehyde gas; but the

most efficient and quickest method is obtained by the use of formalin (40 per cent. solution) and permanganate of potash and a three gallon galvanized pail—no expensive apparatus being necessary. For surface disinfection ten ounces of 40 per cent. solution of formalin and five ounces of potassium permanganate to each 1000 cubic feet of air space should be used. When penetration is necessary double these quantities of formalin and permanganate should be used. The temperature and the humidity of the air of the room should be a high percentage—e.g. temperature 80 degrees F., and air saturated with moisture, as experiments have shown that formaldehyde acts most efficiently in the presence of a high degree of heat and moisture. At low temperatures formaldehyde deposits as paraform and in the absence of moisture it is practically inert as a germicide. Having the room prepared as to temperature and humidity, clothing and fabrics spread about, valuable books standing on ends with leaves apart, water containers removed and windows and doors closed, spread on the floor about the center of the room a large sheet of paper on which put a three gallon bucket. In the bucket put the proper quantity of permanganate of potash as needle like crystals over which pour the formalin solution. In a few minutes rapid reaction takes place with evolution of formaldehyde gas, aqueous vapor, carbon dioxide, and a small amount of formic acid. Quick withdrawal from the room is rendered necessary as reaction is over in a few minutes. Six hours is ample time for keeping the room closed. The room may then be opened and aired, it may be well to advise the removal of all clothing, pillows bedding, mattresses and curtains to an unobstructed exposure to bright sunlight for several days, turning and beating the articles occasionally. Sunshine is a most powerful natural germicidal agent and every opportunity of securing free exposure to sunshine should be embraced. All fabrics not likely to be injured by boiling may be kept in boiling water for thirty minutes or soaked in 1-1000 bichloride solution. Woodwork and floors should be washed in 1-1000 bichloride solution before any sweeping is done. Cheap books and articles of trifling value should be burned.

THE USE OF MORPHINE IN ASTHMA.

Goldschmidt (*Berlinische Wochenschrift*) says that while all the textbooks contain the strict injunction not to give morphine to asthmatic patients, and the number of morphine habitues who are led to begin the habit through its administration for this disease is very large, nevertheless most practitioners find it necessary to opium in many of their cases of asthma. He himself is of the opinion that if carefully watched and controlled the use of the drug is not very dangerous and forms an almost indispensable part of the treatment. Two broad types of cases may be distinguished, those in which the attacks occur at rare intervals and those in which a more or less persistent asthmatic state or status asthmaticus exists. There can be no objection to giving morphine to patients of the first type who have attacks lasting only one or two days, but even in instances of the chronic form for a time at least it may be used without danger. A point of great importance is to realize what exceedingly minute amounts suffice to produce the desired effect. Doses ranging from three to five milligrams hypodermically are usually competent to bring relief in even the severest attacks. Administered in this way there is little tendency to producing addiction, but when the first symptoms of morphinism, instanced by the demand for a considerable increase in dosage appear, some more harmless, though less efficient substitute, like chloral, must be employed.

OPSONINS.

In Science for September 13 Hideyo Noguchi found that opsonins were most active in neutral liquids. The opsonic index estimated in the normal alkaline reacting serum was far lower than that in a neutral medium. The high stability of opsonins against desiccation and the high thermostability of dried opsonins are very striking. Almost no reduction of opsonic strength is evidenced after a serum is completely dried at 23°C for a few hours. In the dry state opsonins are well preserved even after two years. Temperatures below 150°C do not destroy opsonins in the dry state. After heating at 150°C, dry serum becomes difficult to dissolve, but opsonins may still be detected in it. Complements withstand desiccation and dry heat in a manner similar to the resistance of opsonins.

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These important qualities are guaranteed by using the highest permissible temperature in the process of manufacture (130° to 140° Fahr. for 24 hours). No guarantee of this description is possible for preparations made by a cold process with ether.

In prescribing, always state **"HOMMEL'S" Hæmatogen**
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ONLY SUPPLIED IN FLUID, NOT IN CAPSULES OR OTHER FORMS.

Infants - - Take from Half to One Teaspoonful twice a day in milk.
Children - - " One or Two Dessertspoonfuls daily, either pure or mixed with any convenient liquid.
Adults - - " One Tablespoonful twice a day before the two principal meals.

SAMPLES AND LITERATURE, gratis and carriage paid, on application.

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It is the best, purest, and most easily assimilated of all prepared foods.
It is more effectual than any drugs for Sick and Weak People.
It maintains health and vitality, and restores them when the health is impaired.
It can be prepared in various ways according to season and palate.
It can be taken hot or cold, and is ready in a few moments in either form.

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AN APPEAL.

College of Physicians and Surgeons OF CALCUTTA.

(Registered under Act XXI of 1860).

This Institution was established with the object of affording facilities for a **MEDICAL EDUCATION** to Anglo-Indian and Native youths who, for various reasons, are unable to get admission into the existing Government Medical Colleges and Schools. It is under the management and control of an Executive Committee. The education is thorough and the courses complete.

Connected with the College are a small Indoor Male and Female Hospital, also a well-attended Outdoor Dispensary. In both the **HOSPITAL** and **DISPENSARY** everything is free: diet, bedding, medicines, medical comforts, etc. The yearly attendance at the outdoor dispensary is over 10,000 cases.

The Executive Committee solicit public support to enable them to fully and more fittingly carry out the objects of the Institution, more especially of the attached Hospital and Dispensary. The College, with its connected departments, have been maintained, in the past, partly from the fees of the pupils which is quite inadequate for the purpose. The expenses connected with the upkeep of the Hospital and Dispensary are enormous.

Funds are urgently required

1. For medicines, surgical instruments, bedding, diet and other hospital necessities.
2. For building a Hospital which, unlike the present building, will be the property of the College. For the "Hospital Building Fund" subscriptions and donations are specially solicited.

Gifts of clothing, bedding, suitable furniture, furnishings, medicines, surgical instruments, microscopes, pathological and other specimens, medical books and medical journals (old or new) for the library, articles of food (suitable for European and Native patients, etc.), will be thankfully received.

The Members of the Medical Profession, in India, are respectfully asked to co-operate and help, as much as lies in their power.

All communications and remittances to be sent to—

CALCUTTA :

8 to 3-18, Wellesley Street.

Secretary.

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MESSRS. LAWRENCE & MAYO, Ophthalmic Opticians of London, Calcutta, Bombay, Madras and Rangoon, prepare at their Lens Works, any combination of Lenses and Prisms within three days of receipt of the formula.

Correspondence.

Audi Alteram Partem.

VILLAGE SANITATION.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—I have read with much interest an article which appeared in a leading paper on the Resolution of the Government of Bengal dealing with the report of the Drainage Committee of the Presidency Division. The Committee say that the mortality ascribed to malaria is erroneous owing to wrong classification, and they declare the causes of malaria to be the insanitary village sites and the water-logged condition of the country. The want of improvement in villages, so far as sanitation is concerned, is attributed to the indifference and ignorance of the villagers themselves.

With reference to these points I beg to state that the causes of the prevalence of malaria are only two well-known to the villagers of whom whole families have been carried away by the curse of fever. The want of sanitary improvement in the mofussil is not due to the ignorance and indifference of the villagers, but rather to the apathy and indifference of the authorities concerned. From the report on the working of the District Boards it is quite evident that no attention whatever is paid by these Boards to the sanitary condition of their districts, and that scarcely any money is spent by them in that direction. The continuous suffering from malaria and the high price of food have made the villagers quite unable to effect any improvement for the protection of their health without the help of the authorities concerned. They suffer in silence and no endeavour is made by the authorities to mitigate their sufferings, though the Government in 1872 considered seriously legislation on the subject. Since 1871 forces have been at work which have tended more and more to convert well-drained, and healthy and prosperous regions into water-logged tracts exhaling marsh poison. Some of the water-courses which now are inadequate to drain the field were formerly navigable by large vessels. The progress of the evil has been accelerated by the Damodar embankment.

The indiscriminate use of quinine and its free distribution by hospital assistants has made matters worse. These hospital assistants are not competent to treat such cases, and the procedure suggested by the committee would, it is feared lead to the spread of devastation in the mofussil. I may add that the use of quinine by poor agriculturists who are badly fed and housed will do more harm than good.

The further inquiry contemplated to ascertain the relative healthiness of smaller areas than the thanna may well be made by local people, and the following suggestion may perhaps be worth considering. Each thanna may be grouped into different sections, having regard to the geographical position of the thanna, and from different sections intelligent men should be selected to form an association which should be asked to keep a record of vital statistics and to enquire into the causes of the insanitary condition of their area. Of course the selection of men should not be made from Rajas, Raja Bahadurs and Police officers. In that case the actual work in connection with the inquiry will be made by proxy and ultimately will be entrusted to illiterate and unreliable village chowkidars.

With the object of ameliorating insanitary conditions as far as possible by local exertion a Village Improvement Association, representing the local zemindars and in fact the principal inhabitants of about 120 villages in the Dhaniakhali Thanna in the district of Hooghly, has already been formed and the following subjects have been taken up by it.

1. Bad effects of the silting of the natural channels of the districts.
2. Poverty of the population caused by continuous suffering and ill-health and the high price of food.
3. Stoppage of natural village-drainage.
4. Increasing Jungles near habitable tracts.
5. Silting of tanks of drinkable water.
6. Popular ignorance of the magnitude of the evils and preventive measures.
7. Jute steeping near human habitations and thoroughfares.
8. Want of educational institutions.
9. Difficulty of getting canal water for irrigation purposes.
10. Want of repairs of village roads.
11. Want of settlement of petty disturbances amongst the villagers.

The Association has already held two meetings—one at Gurbari and the other at Bhastara in Dhanikhali Thanna—to

explain its objects and to induce the villagers to spare a handful of rice daily towards necessary expenses. The Association intend to carry out their programme with the proceeds of the rice so spared, the contribution made on the occasion of marriage puja and sraddh ceremony, etc., and the savings effected by the curtailment of expenses on account of Barwari Puja. The President of the Board is Kumar Rajendra Nath Mukerjee of Uttarpara, zemindar, and the Secretary is Babu Sreeram Chunder Bose. From the facts you will be pleased to see that the villagers are cognisant of the bad effects of the insanitary condition of their homes. If the formation of such associations is encouraged by the authorities much more improvement will be effected in village sanitation than by any official commission of investigation.

Yours etc.

NOGENDRA NATH BOSE.

INOCULATIONS AT MULKOWAL.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—In connection with the death of a boy at Jalalpur Jattan from tetanus, the result of a blow received while playing, it is interesting to learn that Captain V. H. Roberts I.M.S., the plague doctor at Gujrat, a few days ago inoculated 23 persons, including five women, at Malkowal, the scene of the unfortunate accident connected with inoculation which took place in 1902, and not far from Jalalpur Jattan, where rumours had been set afloat that the above mentioned boy's death was the result of inoculation. That Captain Roberts should have been able to persuade the people to adopt this protection against plague in such a neighbourhood says much for his tact and influence and more for the strong common sense of the people themselves and the good influence of their leading men of whom Seth Chiragh Din, Municipal Commissioner and Hayat Mohamad, an Inam holder are reported to have done conspicuous good work.

Yours etc.,

E. H.

THE NEW HOSPITAL.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—Sir George Clarke laid the foundation stone of the Bomanji Petit Paris General Hospital in the presence of a great gathering of Parsis. The Governor was accompanied by the Gaikwar of Baroda and the occasion was especially interesting as being the first on which His Excellency has appeared at a public ceremony since his arrival in Bombay, Lady and Miss Clarke being also present. Mr. Jehanghir Petit read a long report of the hospital scheme and the building and announced additional subscriptions bringing the

total to 15 lakhs. Sir Jamsetjee Jeejeebhoy invited his Excellency to lay the foundation stone. Sir George having done so congratulated the Parsis on the magnificent building being erected and said Lady Clarke and himself had come to India with the object of relieving the burden of the people, especially the poorer people of Bombay.

Yours etc.,

A. N. C.

MALARIA AT JAJOOR.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—“Malaria is still raging at Jajoor. Almost every family is down with it. Cholera has also appeared. The want of a doctor is keenly felt. There is no good doctor within four miles of the village on whom the people may safely rely. The Sub-divisional Officer of Serampur came a few days ago. The Panchayet President pointed out to him that the lack of good drinking water was the cause of the sickness. The officer said that he would speak to the local zemindar on the subject and ask the District Board to help. The water in all the tanks has become abominable to the taste and unfit for use. Many inhabitants are running away to Calcutta for the sake of their lives.”

Yours etc.,

REFORM.

CROCODILES AND DISEASE.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—Professor Koch, who has been living for eighteen months on a desolate island belonging to the Sesse Group in the middle of Lake Victoria Nyansa, with an Army Medical Surgeon as his sole companion, has told an interviewer on his return that sleeping sickness is particularly prevalent in the Sesse Island, the inhabitants in which are gradually dying off through the ravages of the disease. The Professor discovered that the insect known as the “Glossina Palpalis” conveys the germs of the disease (trypanosomes) not only on the banks of the lakes but also along the streams in the interior right up to the source. Professor Koch has ascertained that there is a distinct connection between crocodiles and sleeping sickness. Wherever crocodiles are found the disease may be discovered, but only in places near the banks. The blood of crocodiles forms the chief nourishment of the glossina, which sucks the blood between the plates of the animal's hide. The extermination of the glossina is impossible, but the same end may be reached by destroying the crocodiles or by the removal of the bushes and undergrowth where the animals lurk.

Yours etc.,

R. F.

Those drugs which invariably effect the immediate relief of menstrual disturbances by acting directly, and in an agreeable manner, upon the reproductive apparatus, are collectively presented in

ERGOAPIOL (SMITH)

The preparation exerts an impressive anodyne and sedative effect upon the uterus and ovaries, and imparts vitality and functional activity to the entire generative system. While the function-promoting action of the preparation is surprisingly prompt, no untoward effects attend its administration.



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IS OF INESTIMABLE IMPORTANCE IN THE TREATMENT OF

AMENORRHEA, DYSMENORRHEA

AND OTHER

MENSTRUAL IRREGULARITIES.



DOSE.—ONE TO TWO CAPSULES, THREE OR FOUR TIMES A DAY, ACCORDING TO THE EXIGENCIES OF THE INDIVIDUAL CASE.

Ergoapiol (Smith) is marketed in metal boxes containing twenty capsules. The preparation is obtainable at all prescriptionists.

LITERATURE.—PAMPHLETS BEARING UPON THE THERAPY OF THE PREPARATION WILL BE SENT, POST PAID, ON REQUEST.

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The most Delicious,
Refreshing and Invigorating
of all Cocoas.

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APERIENT WATER

Is a clear, pure water, containing the most soluble purgative salts effectively combined.

Acts as an intestinal antiseptic, as well as a purgative, eliminating germs and preventing auto-infection (ptomaine poisoning). This action is solely due to sodium sulphite contained as a fixed compound in the water.

Is acceptable to nearly all patients, as it never produces nausea, weakness nor thirst. In its use purgation is not followed by constipation, as is unfortunately and commonly the case with other purgative waters.

Does not weaken; it produces a tonic effect, stimulating the whole system; appetite is increased, sallowness and foulness of the breath disappear, headaches and vertigo vanish.

Is the only purgative water the use of which is unaccompanied with disadvantages in genito-urinary diseases.

Relieves women suffering with hemorrhoids and diseases of the uterus and ovaries, by reducing the congestion of the pelvic viscera.

Re-establishes the normal flow of bile, and is thereby a prophylactic in cases of biliary colic, due to the passage of biliary calculi.

Is indicated in cases of flatulency, bilious attacks, eczema, glandular enlargements and scrofula.

Benefits chronic nervous conditions, atony of the stomach and intestines, certain forms of diseases of the heart and circulatory system, chronic cases of skin affections and certain diseases of the lungs.

If used regularly alone, will often suffice in cases of influenza, diarrhoea, malaria, gastric and febrile disorders and infectious diseases by enabling the engorged, digestive, circulatory and lymphatic systems to regain their normal condition.

Acts in trifling doses. One small wineglass taken on an empty stomach immediately before breakfast produces a well-marked laxative effect in an adult. The dose for women or children should be reduced to one-half or one-third.

Is now considered an indispensable mineral water, especially in large city practices where it is important to husband the patient's strength, under penalty of their developing anemia, or breaking down under the nervous strain and becoming neurasthenics.

Is cheapest because best. It is now prescribed by the leading physicians and stocked by all first-class retail druggists.

The ORIENTA Manufacturing Co., Cal., Ind.

A sample bottle will be sent free to any Physician if he will pay express charges.

SOLD EVERYWHERE.

PLAGUE INSPECTION ON THE COAST.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—A mass meeting of about 3,000 inhabitants of Konkan was held under the auspices of the Maratha Aikyeche Sabha in the Hall of Jain Dharmastan to memorialize the Bombay Government for the abolition of the medical inspection that takes place at the Bombay harbour of out-going passengers by coasting steamers. Sir Bhalchandra Krishna Bhatavadekar, Kt., presided on the occasion. The first resolution to adopt the draft memorial was moved by Mr. K. R. Korgawkar, President of the Maratha Aikyeche Sabha who after reading the memorial, proved by convincing arguments the futility of the inspection. After Mr. K. A. Keluskar, Secretary of the Sabha, having seconded the resolution and translated the memorial in Marathi, it was put to the vote and passed unanimously.

The second resolution to authorise the President to forward the memorial to Government under his signature was moved by Mr. S. K. Bole and was duly seconded and supported by Mr. J. K. Parulkar and K. Kadam and Dr. Salunke and was unanimously passed.

The President, in the course of his long speech said that the object of Government in establishing the medical inspection was to prevent the spread of plague but it has spread all over the country in spite of the inspection. After the declaration of the Plague Commission that the rat flea is the carrier of the infection to man, the medical inspection becomes unmeaning and ridiculous and causes great hardships and annoyance to a large portion of the coast residents.

With thanks to the President and the trustees of the Jain Dharmastan proposed by Dr. A. N. Sambare and seconded by Rao Bahadur Vaidya and Dr. Dhalgukar, the proceedings came to an end.

The following is the memorial sent to Government.

"The gracious and sympathetic message of His Majesty the King-Emperor and the solicitude evinced by your Excellency for the people's welfare in a letter recently addressed to the Press have emboldened your humble memorialists to approach your Excellency in Council on the subject of the Medical Inspection at the Bombay harbour of outgoing passengers by coasting steamers, plying from Bombay down the Konkan coast. This inspection, which has been established by Government to prevent the spread of plague contagion from Bombay to the coast towns, and villages, has failed in its object as it is well

known that plague has spread along the Konkan coast in spite of the inspection. This fact alone will be a sufficient argument why Government should abolish this obnoxious measure which puts your humble memorialists to great inconvenience and annoyance and practically denies them specially during illness the much-needed change to the freer and healthier climate of the homes. Your memorialists are mostly ignorant and poor working in mills and other factories and living in ill-ventilated, insanitary and overcrowded chawls and to deny them, for no practical benefit to the public a chance, of that much-needed change, for they especially, their women are frightened to undergo the Medical Inspection even though they be in generally good health is your humble memorialists beg to submit, rather cruel. The great hardships and annoyance which your humble memorialists have to undergo on account of the inspection will be found depicted in the numerous petitions already submitted to government and in the references made to the subject by Sir Bhalchandra Krishna, Kt., and by the Hon. Messrs. H. E. Proctor and Daji Adaji Khare at meetings of the local Legislative Council. Besides the above the following are the other very cogent reasons why the Medical Inspection should be abolished.

The first reason is that the conclusions arrived at by the Plague Commission in regard to the spread of plague are altogether against the continuance of the inspection. The Commission have declared that the rat alone is the source of plague and the rat-flea is the medium which conveys it from rat to rat and from rat to man. This conclusion having been endorsed by Government, there does not appear any justification for the continuance of the inspection. Its continuance would mean that Government still believe in the fallacy that man conveys the infection. It may further be pointed out that in all recent official communications on the subject of plague by H. E. the Viceroy and the Local Governments, rat destruction, evacuation and inoculation are the only measures advocated for checking the spread of plague, no reference

SAL HEPATICA

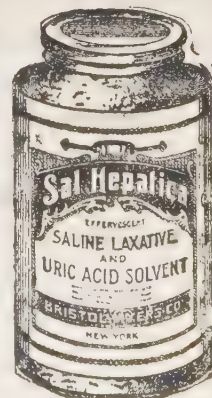
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URIC ACID SOLVENT.

A combination of the Tonic, Alterative and Laxative Salts similar to the celebrated Bitter Waters of Europe, fortified by the addition of Lithia and Sodium Phosphate. It stimulates the liver, tones intestinal glands, purifies alimentary tract, improves digestion, assimilation and metabolism. Especially valuable in Rheumatism, Gout, Biliary Attacks and Constipation. Most efficient in eliminating toxic products from intestinal tract or blood, and correcting vicious or impaired functions.

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whatever being made to medical inspection. Even supposing that man carries the infection the present system of inspection, your humble memorialists beg to submit, cannot succeed in its object to any appreciable extent, in as much as within the inoculation period which generally lasts for ten days, any number of passengers without any signs of plague fever being developed, will successfully stand the inspection and thus escape undetected.

The second reason is that there is no medical inspection for passengers going to Alibag or Revdanda. Those therefore who wish to avoid inspection; can go to Revdanda first and thence by another steamer to their homes in South Konkan. This means only additional expense, trouble and annoyance. But so far as the Medical Inspection at the Bombay harbour is concerned, it becomes little short of ridiculous for this reason.

The third reason is that whatever imaginary protection against plague contagion is to be afforded by the inspection at Bombay it is nullified by the fact that all the coast towns and villages have an unrestricted communication with the plague stricken up country districts by means of railways and roads.

Your humble memorialists therefore pray that your Excellency in Council will be graciously pleased to take the above facts into consideration and issue orders for discontinuance of the inspection a grievance which has been causing unnecessary hardships and annoyance to a large portion of the coast resident without fulfilling the object for which it was originally imposed. In this connection your Excellency's humble memorialists may be allowed to cite the instance of Karachi, where Medical Inspection for outgoing passengers has been abolished for the last two years though the city is badly infected during particular season every year, and no necessity is felt for reimposing it. This fact, your humble memorialists believe, will greatly induce your Excellency in Council to remove a source of much dissatisfaction amongst a large portion of the public.

Yours etc.,

W. G. L.

CHANDNEY OUT-DOOR HOSPITAL.

TO THE EDITOR, THE INDIAN LANCET.

SIR,—I shall be much obliged if you will kindly publish the enclosed list of further donations received towards the rebuilding of the Chandney Out-door Hospital:—

Amount already acknowledged. 28,223-1-0

Since received :

Maharaj Kumar Kristo Dass Law. 150-0-0

Messrs, Whiteaway, Laidlaw & Co. 100-0-0

R. H. M. Rustomjee, Esqr. 50-0-0

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The Office staff Govt. Printing (2nd Instant.) 13-0-0

Mrs. DeSilver 5-0-0

Mrs. I. M. Small, ... 5-0-0

Mrs. Pyle. 1-0-0

Total Rs. 28,622-1-0

Further donations may be sent to me or to Dr. N. C. Mukerjee at the Chandney Hospital and will be thankfully received and acknowledged.

F. P. MAYNARD, Lt. Col., I. M. S.

Superintendent & Secretary,

Mayo Native Hospital.

Calcutta, 7th Jan.

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Prescriptions dispensed day and night, and urine analysis done.

Dr. N. N. Dey, L.R.C.P. & S., Edin. L.F.P. & S., Glasgow &c., can be consulted daily between the hours of:—

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Glyco-Heroin (Smith)

The preparation instantly diminishes cough, augments expulsion of secretions dispels oppressive sense of suffocation, restores regular, pain-free respiration, and subdues inflammation of the air passages.

The marked analgesic, antispasmodic, balsamic, expectorant, mucus-modifying and inflammation-allaying properties of

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explain the wonderful curative action of the preparation in the treatment of

**Coughs, Bronchitis, Pneumonia, Laryngitis,
Pulmonary Phthisis, Asthma, Whooping Cough
and the various disorders of the breathing passages.**

Glyco-Heroin (Smith) is admittedly the ideal heroin product. It is superior to preparations containing codeine or morphine, in that it is vastly more potent and does not beget the by-effects common to those drugs

DOSE—The adult dose is one dram, repeated every two or three hours. For children of more than three years of age, the dose is from five to ten drops.

Glyco-Heroin (Smith) is marketed in one-pound bottles, thus enabling the physician to prescribe whatever amount the individual case may require. The prevailing prescriptions are for three ounces. The preparation is obtainable at all prescriptionists.

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Two per cent. solution of Silver Nitrate in Ethylenediamine. An organic Silver Salt possessing the property of penetrating very deeply into the tissues. Its use is not accompanied by the many inconveniences to the patient which are found with the ordinary Silver Salts.

Superior hypnotic without harmful or unpleasant by-effects, having the following advantages over Chloralhydrate.—Its action develops more gradually. The depressing effect of Chloral upon the heart is counteracted by the action of the formamide contained in Chloralamid. It does not cause headache. Chloralamid should on no account be dispensed in hot solutions.

In fruit-sugar for Diabetics, being perfectly assimilated, and constitutes therefore a superior dietetic also for consumptive patients.

Soluble Phenacetine. A valuable anti-pyretic, anti-rheumatic, and anti-neuralgic. Recommended in malarial fever. Harmless to the action of the heart and circulation of the blood.

Freely dissolving urinary deposits, is promptly eliminated by the kidneys, and perfectly harmless. Strongly recommended in all cases of uric acid diathesis.

A preparation containing Mercury Sulphate and Ethylenediamine in chemical combination. By the presence of Ethylenediamine the irritating action to the skin is entirely avoided, and, what is equally important, a most phenomenal penetrative power is secured for the metallic disinfectant, inasmuch as the presence of Ethylenediamine prevents the coagulation of the albuminous substances of the skin usually produced by metallic agents, and thus permits of easy and deep penetration of the Sublimate without any inconvenience. Recommended for thorough hand disinfection. [of Berlin.]

Registered Trade Mark. Manufactured under the control of Prof. Dr. A. Nicolaier, a valuable urinary antiseptic and uric acid solvent, very efficient in all suppuratory diseases of genito-urinary tract, pyelitis, cystitis, with ammoniacal decomposition of the urine, phosphaturia, and also in gouty and rheumatic affections, where active elimination of uric acid and the urates is required. Highly recommended in typhoid bacteriuria as a prophylactic against the spread of typhoid fever.

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NERVOUS EXHAUSTION

NEW LIFE & VIGOR

Nervous Exhaustion, or Neurasthenia, as it is now called, is well defined by that world-famed scientist and investigator

DR. JAMES H. BEARD, M.A., M.D.,

to be "a chronic functional disease of the Nervous System, the basis of which is impoverishment of Nervous force, waste of Nerve tissue in excess of repair, hence the lack of inhibitory or controlling power—physical and mental—the feebleness and instability of nerve action, and the excessive sensitiveness and irritability, local and general, direct and reflex. The fatigue and pain that temporarily follow excessive toil or worry or deprivation of food or rest, are symptoms of Acute Neurasthenia, from which the chronic form differs only in permanence and degree. Nervousness is really Nervelessness." There are thousands of people who, given up as incurables, their strength and powers undermined as a result of Nervous Exhaustion, to whom "New Life and Vigor" are magic words, are languishing for the greatest of all blessings: Robust Health and Restored Vitality. To all such we commend the use of B. & S. SOLUTION, the celebrated remedy discovered by Dr. Lawrence, M.D., which has been used in all parts of the world for over quarter of a century.

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known drugs of the
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**MOST VALUABLE
NERVE TONIC**

**The
Survival
of
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This remarkable compound, the result of the latest developments of modern Chemistry, Pharmacology, and Therapeutics, is without an equal in all cases of Nervous Exhaustion and Premature decay, whether induced by worry, overwork, or other exhausting causes. As a real nerve tonic and invigorating agent it has no equal in the whole field of Therapeutics and may be relied upon to impart "NEW LIFE AND VIGOR," and to restore weakened constitutions to pristine strength and energy. When every other medicine has failed, B. and S. SOLUTION has been prescribed in the most inveterate cases by the best physicians with success, and there are thousands of living witnesses to attest to the benefits derived from this great modern invention. The Profession will find it to be without a rival and the finest medicine ever brought to their notice.

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Reviews of Books.

A Manual of Diseases of the Nose, Throat, and Ear. By E. Baldwin Gleason, M. D., Clinical Professor of Otology at the Medico-Chirurgical College, Philadelphia. 12mo of 556 pages, profusely illustrated, London, W. B. Saunders Company, 1907.

This handy volume of 556 pages contains a surprising amount of information and covers, in a clever and concise manner, the important facts of nose, throat and ear work. The book is intended for the use of students and general practitioners who want the essentials of this special field of medicine.

The first 64 pages are devoted to a description of the various instruments, some of which are of the author's design, used in treatment, for diagnosis and in operations. It also describes the methods of examining patients. The remainder of the volume is divided into five parts: (1) Nose; (2) Parynx; (3) Tonsils; (4) Larynx; (5) Ear. Under each heading is given briefly the important facts of the anatomy, physiology and pathology of the organs, which increases the value of this work as a text-book. The subject matter under each head is carefully considered and presented in a clear manner. The author makes frequent reference to cases and incidents connected with his extensive experience, which adds to the interest as well as being instructive. At the end of the volume are some 42 pages of formulas, which have been referred to in the text by their numbers, thus saving space and repetition. The book is profusely illustrated with 262 engravings, most of which are good. We can heartily recommend this book by Dr. Gleason.

Government Medical Notifications.

INDIA.

Major A. J. Macnab, F.R.C.S., I.M.S., (Bengal), Civil Surgeon of Simla, is granted privilege leave for one month, with effect from the date on which he may avail himself of it.

Major R. Heard, M.B., I.M.S., (Bengal), Joint Medical Officer, Simla, is appointed to officiate as Civil Surgeon of Simla during the absence on leave of Major A. J. Macnab, F.R.C.S., I.M.S., (Bengal), in addition to his own duties.

The services of Captain Dewan Ganpat Rai, I.M.S., are placed permanently at the disposal of the Government of Madras.

BENGAL.

Babu Debendra Nath Mukharji, third grade Assistant Surgeon, is appointed to do supernumerary duty in the Medical College Hospital, Calcutta, until further orders, with effect from the forenoon of the 13th December 1907.

Captain H. B. Foster, I.M.S., made over charge of the Burdwan Jail to Captain R. P. Wilson, I.M.S., on the forenoon of the 28th December 1907.

Captain M. Mackelvie, I.M.S., acted as Civil Surgeon of Howrah during the absence, on leave, of Lieutenant-Colonel J. B. Gibbons, I.M.S., from the 13th August to the 7th October 1907.

Major J. T. Calvert, I.M.S., acted as Civil Surgeon of Howrah during the absence, on leave, of Lieutenant-Colonel J. B. Gibbons, I.M.S., from the forenoon of the 8th October to the forenoon of the 18th November 1907.

Government Notifications No. 1110Med., dated the 2nd December 1907, granting privilege leave for fifteen days to Dr. R. H. Pulipaka, Civil Surgeon, Nadia, and No. 1112Med., of the same date, appointing Assistant Surgeon Babu Kali Mohan Sen, of the Krishnagar Charitable Dispensary, to hold medical charge of the civil station of Nadia, in addition to his own duties, during the former's absence on leave, are hereby cancelled.

UNITED PROVINCES.

Civil Assistant Surgeon Mahim Lal Deb, attached to the District Hospital, Bara Banki, privilege leave, for three months, with effect from the 29th November 1907.

Civil Assistant Surgeon Jai Gopal Mukharji, on reserve duty at Gorakhpur, to the charge of the District Hospital, Bara Banki, as a temporary measure.

Military Assistant Surgeon H. C. Thompson, in medical charge, Chakrata, to be Assistant to the Civil Surgeon Lucknow.

BURMA.

Third Grade Hospital Assistant, No. 314, Maung Tun Nyein relinquished at the General Hospital, Mandalay, on the afternoon of the 16th November 1907 and assumed charge at the Civil Hospital, at Mogok, Ruby Mines District, on the afternoon of the 23rd November 1907, as a supernumerary.

Third Grade Hospital Assistant, No. 314 Maung Tun Nyein relinquished charge of supernumerary duty at the Civil Hospital, Mogok, Ruby Mines District, on the afternoon of the 30th November 1907 and assumed charge at the Civil Hospital, at Mogok, on the afternoon of the same date.

Third Grade Hospital Assistant, No. 314, Maung Tun Nyein assumed charge of additional duty at the Jail Hospital, Mogok, Ruby Mines District, on the afternoon of the 30th November 1907.

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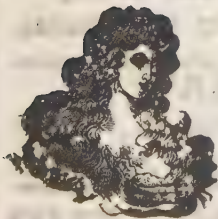
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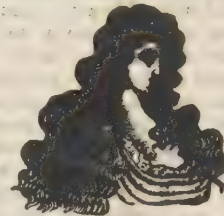
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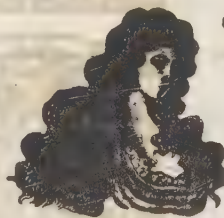
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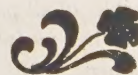
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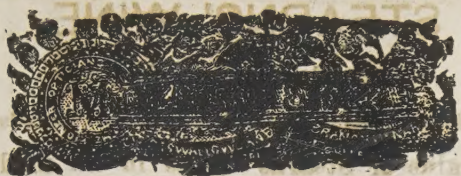
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